Unclassified
Security Classification of this page

REPORT DOCUMENTATION PAGE

1a Report Security Classification: Unclassified	1b Restrictive Markings
2a Security Classification Authority	3 Distribution/Availability of Report
2b Declassification/Downgrading Schedule	Approved for public release; distribution is unlimited.
4 Performing Organization Report Number(s)	5 Monitoring Organization Report Number(s)
6a Name of Performing Organization: Naval Postgraduate School; 6b Office Symbol (*if applicable*) 36	7a Name of Monitoring Organization: Naval Postgraduate School
6c Address (*city, state, and ZIP code*): Monterey CA 93943-5000	7b Address (*city, state, and ZIP code*): Monterey CA 93943-5000
8a Name of Funding/Sponsoring Organization; 6b Office Symbol (*if applicable*)	9 Procurement Instrument Identification Number
Address (*city, state, and ZIP code*)	10 Source of Funding Numbers: Program Element No; Project No; Task No; Work Unit Accession No

11 Title (*include security classification*) A COHORT ANALYSIS OF CAREER PROGRESSION FOR ETHNIC AND FEMALE OFFICERS IN THE U.S. NAVY

12 Personal Author(s) Lisa R. Werkhaven

13a Type of Report	13b Time Covered From To	14 Date of Report (*year, month, day*)	15 Page Count
Master's Thesis		1993, March	329

16 Supplementary Notation The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

17 Cosati Codes			18 Subject Terms (*continue on reverse if necessary and identify by block number*)
Field	Group	Subgroup	Promotion Rates, Loss Rates, Ethnic, Black, Hispanic, Female, Officer, Cohort Analysis

19 Abstract (*continue on reverse if necessary and identify by block number*)

The goal of this thesis was to conduct a cohort analysis to compare the career opportunities, in terms of loss and promotion rates, of Black, Hispanic and female naval officers with those of white ethnic and male officers, respectively. Inventory and promotion data was compiled from the Officer Personnel Information System data file to compute ethnic/gender loss and promotion rates for year groups 1960-1991 in the Surface, General Unrestricted Line, Aviation and Submarine communities. Computation of loss and promotion rates was conducted in three stages. The first stage computed rates for each year group by year of service (YOS). The second stage computed rates averaged across year groups for each YOS. The third stage computed rates within milestone periods which grouped YOSs into six or seven significant periods in each community's career path. Rates were averaged for each milestone period across several year groups and all YOS's within that period. This study found differences in loss and promotion rates specific to each community and ethnic/gender group. In many cases, higher loss rates were accompanied by lower promotion rates for the ethnic and gender groups studied, with notable exceptions. Further research is recommended to determine reasons for differences in loss and promotion rates as well as to conduct a similar study in five to ten years, in which time more data would become available.

20 Distribution/Availability of Abstract: _X_ unclassified/unlimited ^__ same as report __ DTIC users	21 Abstract Security Classification: Unclassified	
22a Name of Responsible Individual: Paul R. Milch	22b Telephone (*include Area Code*): (408) 656-2882	22c Office Symbol: OR/MH

DD FORM 1473,84 MAR 83 APR edition may be used until exhausted
All other editions are obsolete

security classification of this page
Unclassified

T259275

Approved for public release; distribution is unlimited.

A Cohort Analysis of Career Progression for Ethnic and Female Officers in the U.S. Navy

by

Lisa R. Werkhaven
Lieutenant Commander, United States Navy
B.S., Muskingum College, 1980

Submitted in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
March 1993

Department of Administrative Sciences

ABSTRACT

The goal of this thesis was to conduct a cohort analysis to compare the career opportunities, in terms of loss and promotion rates, of Black, Hispanic and female naval officers with those of white ethnic and male officers, respectively. Inventory and promotion data was compiled from the Officer Personnel Information System data file to compute ethnic/gender loss and promotion rates for year groups 1960-1991 in the Surface, General Unrestricted Line, Aviation and Submarine communities. Computation of loss and promotion rates was conducted in three stages. The first stage computed rates for each year group by year of service (YOS). The second stage computed rates averaged across year groups for each YOS. The third stage computed rates within milestone periods which grouped YOSs into six or seven significant periods in each community's career path. Rates were averaged for each milestone period across several year groups and all YOS's within that period. This study found differences in loss and promotion rates specific to each community and ethnic/gender group. In many cases, higher loss rates were accompanied by lower promotion rates for the ethnic and gender groups studied, with notable exceptions. Further research is recommended to determine reasons for differences in loss and promotion rates as well as to conduct a similar study in five to ten years, in which time more data would become available.

Thesis
W4643
C.1

TABLE OF CONTENTS

I. INTRODUCTION 1

A. BACKGROUND 1

B. OBJECTIVE AND SCOPE 8

C. OVERVIEW 11

II. MINORITIES AND WOMEN IN THE NAVY 12

A. BLACKS IN THE NAVY 12

B. HISPANICS IN THE NAVY 15

C. WOMEN IN THE NAVY 18

III. NAVY PROMOTION PROCESS 21

A. BACKGROUND 21

B. THE NAVY'S PROMOTION PROCESS 23

IV. DATA AND METHODOLOGY 26

A. DATA 26

B. WORKING DEFINITIONS 27

1. Year Group (YG). 27

2. Years of Service (YOS). 27

3. YOS/Grade Category 27

4. Inventories. 28

5. Losses. 28

6. Lateral Transfer 28
C. COHORT ANALYSIS 28
1. Cohort Analysis 28
2. Loss Rates 29
3. Promotion Rates 30
D. METHODOLOGY 30
E. DETERMINATION OF LOSS AND PROMOTION RATES . . . 32
1. Individual Rates by YOS and YG 32
a. Loss Rates 32
b. Promotion Rates 33
c. Effect of Lateral Movement on Loss and Promotion Rates 34
2. Average Rates by YOS 36
3. Milestone Period Rates 37
a. Milestone Periods for Surface Warfare Community 38
b. Milestone Periods for General Unrestricted Line (GenURL) Community 40
c. Milestone Periods for Aviation Warfare Community 41
d. Milestone Periods for Submarine Warfare Community 42

V. ANALYSIS 44
A. INTRODUCTION 44
1. Analysis of Rates 44

2. Effect of Population Size on Analysis . . . 45
B. ANALYSIS OF SURFACE WARFARE COMMUNITY 45
1. Black Officers 46
a. Black Loss Rates 46
b. Black Promotion Rates 47
2. Hispanic Officers 48
a. Hispanic Loss Rates 48
b. Hispanic Promotion Rates 49
3. Female Officers 50
a. Female Loss Rates 50
b. Female Promotion Rates 51
4. Summary 52
C. ANALYSIS OF GENERAL UNRESTRICTED LINE COMMUNITY 52
1. Black Officers 53
a. Black Loss Rates 53
b. Black Promotion Rates 54
2. Hispanic Officers 55
a. Hispanic Loss Rates 55
b. Hispanic Promotion Rates 56
3. Female Officers 57
a. Female Loss Rates 57
b. Female Promotion Rates 59
4. Summary 60
D. ANALYSIS OF AVIATION WARFARE COMMUNITY 61
1. Black Officers 61
a. Black Loss Rates 61

b. Black Promotion Rates 63
2. Hispanic Officers 64
a. Hispanic Loss Rates 64
b. Hispanic Promotion Rates 65
3. Female Officers 66
a. Female Loss Rates 66
b. Female Promotion Rates 68
4. Summary 69
E. ANALYSIS OF SUBMARINE WARFARE COMMUNITY 69
1. Background 69
2. Black Officers 70
a. Black Loss Rates 70
b. Black Promotion Rates 71
3. Hispanic Officers 72
a. Hispanic Loss Rates 72
b. Hispanic Promotion Rates 73
4. Summary 73

CHAPTER VI. CONCLUSIONS AND RECOMMENDATIONS 75
A. CONCLUSIONS 75
B. RECOMMENDATIONS 79

APPENDIX A - OPIS FILE VARIABLES AND CODES 81

APPENDIX B - INVENTORIES 82

APPENDIX C - LOSS DATA 101

APPENDIX D - PROMOTION-ELIGIBLE DATA 120

APPENDIX E - PROMOTION DATA 139

APPENDIX F - LOSS RATES 158

APPENDIX G - PROMOTION RATES 177

APPENDIX H - LOSS RATES BY YEAR OF SERVICE AVERAGED ACROSS YEAR GROUPS 196

APPENDIX I - PROMOTION RATES BY YEAR OF SERVICE AVERAGED ACROSS YEAR GROUPS 201

APPENDIX J - LOSS RATES BY MILESTONE PERIOD AVERAGED ACROSS YEAR GROUPS 206

APPENDIX K - PROMOTION RATES BY MILESTONE PERIOD AVERAGED ACROSS YEAR GROUPS 210

APPENDIX L - MILESTONE PERIOD LOSS RATES BY YEAR GROUPS 213

APPENDIX M - MILESTONE PERIOD PROMOTION RATES BY YEAR GROUPS 221

APPENDIX N - SUPPORTING GRAPHS FOR THE SURFACE WARFARE COMMUNITY 229

APPENDIX O - SUPPORTING GRAPHS FOR THE GENERAL UNRESTRICTED LINE COMMUNITY 255

APPENDIX P - SUPPORTING GRAPHS FOR THE AVIATION WARFARE COMMUNITY 283

APPENDIX Q - SUPPORTING GRAPHS FOR THE SUBMARINE WARFARE COMMUNITY 306

LIST OF REFERENCES 316

INITIAL DISTRIBUTION LIST 318

I. INTRODUCTION

The Navy of today is committed to achieving an officer and enlisted force fully representative of American society's varied ethnic composition and providing for equal career progression opportunities. In addition to recruitment, retention and promotion of quality personnel are key elements in defining these opportunities and are crucial to building and maintaining a professional force utilizing all available personnel resources.

A. BACKGROUND

On July 26, 1948, President Harry S. Truman issued Executive Order 9981, which called for "equality of treatment and opportunity for all persons in the armed services without regard to race, color, religion or national origin." (Northrup, 1979) About 30 years later, the percentage of minority officers participating in the Navy officer corps, particularly

Blacks and Hispanics[1], has finally begun to increase slowly as shown in Table I.

Table I. MINORITY GROWTH IN THE NAVY'S OFFICER CORPS AS A PERCENTAGE OF TOTAL OFFICER FORCE

	1976[1]	1982[1]	1987[1]	1991[2]
Blacks	1.6	2.9	3.4	4.3
Hispanics	1.0	0.9	1.8	2.5

Source: [illegible], 26 December 1988
[illegible]1991 Military Equal Opportunity Assessment Report
Note: Includes W-1 to O-10 paygrades

Although career opportunities have expanded for minority officers in the last 40 years, a 1987 Navy assessment of Equal Opportunity Programs indicated little progress in recruiting and retaining Black and Hispanic officers; wide disparities between Black and White officers in promotion rates to

---

[1] Ethnic terminology used in this thesis is based on Department of Defense Military Equal Opportunity Program Directive 1350.2, December 23, 1988 which uses the following definitions:

1 Black (Not of Hispanic Origin). A person having origins in any of the original peoples of Africa.

2 Hispanic. A person having origins in any of the indigenous peoples of Mexico, Puerto Rico, Cuba, or Central or South America, or of other Spanish cultures, regardless of race.

3 White (Not of Hispanic Origin). A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

lieutenant commander, commander and captain; and failure of minority officers (and enlisted personnel) to enter technical career paths in representative numbers (Longo, 26 December 1988). These disparities led to formation of an Equal Opportunity Study Group in 1988 which resulted in the installation of new training programs and the revitalization of the Navy's affirmative action program.

As of 1991, recruitment, promotion and retention of minority officers have improved significantly. Recruitment goals of 7 percent Black and 4 percent Hispanic, to support achieving a minority officer inventory goal of 6 percent Black by the end of FY-2000 and 3 percent Hispanic by the end of FY-99, were essentially realized with the commissioning of 424 Black officers (6.6 percent of total) and 244 Hispanic officers (3.8 percent of total). Table II shows the progress of recruitment of minority officers from 1975 to 1991. As percentages of their own race/ethnic group, overall Black and Hispanic in-zone promotion rates were comparable to those of White officers on the FY-91 active duty promotion boards. Minority officer retention figures compare favorably with those of White officers. This is important because higher retention rates will increase minority demographic representation throughout the Navy. (1991 MEOA)

Table II. PERCENTAGE OF OFFICER ACCESSIONS WHO ARE BLACK AND HISPANIC, SELECTED YEARS, 1975-1991

	1975[1]	1978[1]	1981[1]	1984[1]	1987[1]	1991[2]
Black	2.5	4.5	3.4	4.6	4.2	6.6
Hispanic	1.1	1.0	1.3	3.1	2.9	3.8

[illegible]
[2]1991 ME A

While the Navy has made progress towards attaining a more demographically balanced force, some concerns still remain regarding minority opportunities. Minorities continue to be underrepresented in the officer corps, especially in the senior ranks. Blacks now comprise 4.3 percent of the total officer force and Hispanics are 2.5 percent of the force. The minority officer inventory goal reflects the percentage of minorities with college degrees in the general population. Interim inventory goals of 4.1 percent Black and 2.2 percent were met in FY1991.

However, as Table III shows, there are much lower percentages of minorities in most of the higher officer paygrades (such as O-6 through O-8). Also, minorities are underrepresented in the technical fields, such as the submarine and aviation communities as shown in Table IV.

Table III. PERCENTAGE DISTRIBUTION OF MINORITY OFFICERS BY PAYGRADE FOR FY1991

Paygrade	O-1	O-2	O-3	O-4	O-5	O-6	O-7	O-8	O-9
Black	6.3	5.0	4.3	3.3	2.3	1.2	1.6	0.0	4.3
Hispanic	3.8	3.6	2.8	1.5	1.2	0.6	2.3	1.1	0.0

Source: 1991 MEOA

Table IV. PERCENTAGE OF MINORITY OFFICERS IN AVIATION, SUBMARINE, SURFACE, AND GENERAL UNRESTRICTED LINE COMMUNITIES FOR THIRD QTR FY1992

Community	Aviation	Submarine	Surface	GenURL
Black	2.16	1.07	5.46	10.19
Hispanic	2.57	1.25	3.06	2.62

Source: Navy-Wide Demographic Data for Third QTR FY1992
Note: Reflects O-1 to O-10 paygrades

On a somewhat parallel course with minorities are female officers in the Navy. Although women (nurses) have been accorded formal Navy status since 1908, it has only been since the inception of the all-volunteer military in 1972 that women have become a significant and integral part of the Navy. Women comprised 11.3 percent of the total officer force (W-1 to O-10) in 1991 (1991 MEOA) compared to 2.3 percent in 1973 (GAO/NSIAD-89-210BR), and the types of jobs held by women have continued to expand.

However, concerns continue to arise regarding the full integration of women into the military and in particular the officer corps. Like minority officers, women are underrepresented in the senior ranks. Table V shows the percentage distribution of officers by gender in paygrades O-1

through O-9. Women continue to have small representation within the surface and aviation warfare communities (see Table V.2) and remain excluded from certain warfare disciplines, most notably the submarine and special warfare communities.

Table V.1. PERCENTAGE DISTRIBUTION OF OFFICERS BY GENDER AND PAYGRADE FOR FY1991

Gender	O-1	O-2	O-3	O-4	O-5	O-6	O-7	O-8	O-9
Female	13.8	11.5	12.6	12.9	7.9	3.6	1.6	1.1	0.0
Male	86.2	88.5	87.4	87.1	92.1	96.4	98.4	98.9	100

Source: 1991 MEDA

Table V.2. PERCENTAGE DISTRIBUTION OF FEMALE OFFICERS IN THE AVIATION, SURFACE AND GENERAL UNRESTRICTED LINE COMMUNITIES FOR FY1991

Community	Aviation	Surface	GenURL
Female	2.0	1.7	86.4
Male	98.0	98.3	13.6

Source: Navy-Wide Demographic Data for Third QTR FY-91
Note: Reflects O-1 to O-10 pay grades

Promotion and retention of quality officers are key elements in maintaining a professional career force and ensuring maximum utilization of minorities and women in the Navy. Promotion rates are a predominant criterion in maintaining retention eligibility and defining successful career progression. The degree to which minorities and women

are retained has an important impact on their representation in the military. Additionally, retention of minorities and women is a factor in determining the number of minorities and women available and eligible for promotion to the higher pay grades and ranks within the career force. (Northrup, 1979) Underrepresentation of minorities and women in the upper ranks is mostly due to the fact that promotion is dependent on tenure (Eitelberg et al., 1989). An officer has to have a minimum amount of time in grade to be eligible for advancement to the next higher paygrade. For example, to be eligible for promotion to O-6, an officer must exhibit successful career progression through promotion and retention to achieve eligibility criteria of minimum time in grade. Currently, it takes about 22 years for an officer to make 0-6. Accordingly, the earliest the Navy will be able to achieve 6 percent Black representation at the O-6 level is when year group 92 is promoted to Captain. This is also dependent on Black promotion and retention rates being comparable to those of other ethnic groups in that year group.

As required by Department of Defense policy, the Navy monitors the career progression of minority and women officers and submits a report, the Military Equal Opportunity Assessment (MEOA), for the fiscal year. The MEOA provides a statistical analysis on ten selected categories of fair treatment, e.g., promotion, force composition, retention,

recruiting, for all service members through affirmative actions and other initiatives.

The MEOA collects promotion and retention statistics by fiscal year. Another method to monitor career progression would be to track officers within their respective commissioning year groups and determine their representation, promotion and loss rates as they mature in the system. These data could then be analyzed to compare rates within, as well as between, communities to determine if differences exist.

B. OBJECTIVE AND SCOPE

This thesis will examine the composition of selected Unrestricted Line communities of minority and women officers by year group and compute loss and promotion statistics for these cohorts. The study parallels the Navy's MEOA analysis but with one important distinction. Whereas the MEOA looks at statistics by fiscal year, this thesis will address statistical rates by individual commissioning year groups. Fiscal year studies of paygrades are based on data that are aggregates of several year groups. For instance, within the O-3 paygrade in any fiscal year there could possibly exist up to 6 year groups. Retention rates may differ among these various year groups but are not individually observed because in a fiscal year analysis they are combined to report one rate for the entire O-3 paygrade. By tracking the year groups as they mature through their "career" for 30 years, retention and

promotion rates can be observed for each year group by years of service.

The analysis of data will be limited to reporting statistical trends and differences among the minority and women cohorts as compared to those of ethnic White and male officers, respectively. Only Black and Hispanic ethnic groups will be studied because they represent the largest minority ethnic groups in the United States as well as in the Navy. An analysis of gender representation is included in the study because of the increased emphasis on women brought on by their growing numbers and expanding assignment opportunities. Although a background discussion of minority and female participation in the Navy is included in Chapter II, a detailed historical account and analysis of statistical trends in terms of political, military, and social policies is beyond the scope of this thesis.

The study will focus on the Aviation Warfare, Submarine Warfare, Surface Warfare, and General Unrestricted Line (GenURL) communities. Since women are prohibited from permanent assignment aboard submarines, an analysis of gender representation in the Submarine community will not be conducted. Training and Administration of Reserve (TAR) Officers will not be included in the study since these officers have distinctly different career paths from their active-duty counterparts, as well as separate promotion

boards. The Unrestricted Line (URL) officer designators used in the study will include the following:

General Unrestricted Line (GenURL) Community

110X	URL officer

Surface Warfare Officer (SWO) Community

111X	URL officer qualified in Surface Warfare (includes nuclear trained SWOs)
116X	URL officer in training for Surface Warfare Qualification

Submarine Warfare Officer Community

112X	URL officer qualified in submarine Warfare (includes Nuclear and General Submarine Officer)
117X	URL officer in training for Submarine Warfare Qualification

Aviation Warfare Officer Community

130X	URL officer in the aviation community whose rating as pilot or Naval Flight Officer (NFO) has been terminated
131X	URL officer qualified for duty involving flying as pilot
132X	URL officer qualified for duty involving flying as NFO
137X	URL officer in training for duty involving flying as pilot
139X	URL officer in training for duty involving flying as NFO

The study will be limited to the amount and type of data available in the Officer Personnel Information System (OPIS) file maintained by the Navy Personnel Research and Development Center (NPRDC), San Diego, CA. Inventory and promotion data will be used to compute loss and promotion rates for year groups 1960 through 1991. Because some data are not available prior to 1975, year groups 1960 to 1974 will be incomplete. For instance, for year group 1960, rates for the first 14 YOS are missing due to the first availability of data in 1975.

C. OVERVIEW

Chapters II and III create a perspective for the study by presenting a brief history of the minority and female experience in the Navy officer corps and the Navy's promotion practices. Chapter IV identifies the source of data and outlines the methods and statistical procedures used in the study. Chapter V presents the research findings. Chapter VI contains conclusions drawn from the study.

II. MINORITIES AND WOMEN IN THE NAVY

This overview of the experience of minorities and women, particularly officers, in the U.S. Navy is presented to establish a context for this study. It is important to understand the pace and timeframe of the advances gained by these groups, in terms of social acceptance, cultural differences and access to job opportunities. Evidence of these advances would not show up in the senior ranks for about 15 to 20 years after their initial acceptance.

A. BLACKS IN THE NAVY

Blacks have fought in every major American conflict since colonial days. During the Revolutionary War, 1500 Black Americans served their country "manning boats, working sails, loading guns and piloting coastal vessels." (Baldwin, 1983) Following the Revolution, Blacks were prohibited from serving in the armed forces. However this did not stop Blacks from serving in the 1798-1800 naval war with France and in the War of 1812, presumably because of military manpower needs. (Northrup, 1979) A pattern developed wherein Blacks would be recruited to serve in a conflict only when there existed manpower shortages. They would be retained during the conflict but dismissed following the conclusion of the

conflict. This pattern became known as recruit-retain-and-reject and would last until the Korean War. (Butler, 1992)

Black sailors continued to serve on an integrated basis during the Spanish-American War. Policy during this timeframe decreed that Blacks would be limited to serving in the lower ranks. By the time of World War I informal Navy practices began to align themselves with the segregationist influences of the society at large. And, in fact, the Navy instituted a segregationist policy that restricted Blacks to serve in the messmen or steward branch. Ten thousand Black recruits served in World War I in this capacity. In the wake of post World War I reductions, enlistment of Black sailors was almost completely discontinued. (Northrup, 1979) In 1932, the Navy began recruiting Blacks again for messmen duties only.

Because of World War II and its need for manpower, the Selective Service Law of 1940 called citizens to service without regard to race, color or creed. The War Department decreed that Black accessions would be increased in numbers that reflect the proportion of Blacks in the general population. In April 1942, Blacks were accepted into all general service ratings but they were still trained in segregated units. In February 1946, the Navy lifted all service restrictions on Blacks. The Navy was also the first service to institute desegregation policies.

With the onset of the Korean War, demand for military manpower again increased. The need for manpower on the front

line forced the services to integrate combat units with Blacks from the rear supply units. Enlistment of Blacks grew to 4.3 percent of total enlistments for the Navy by the end of the War. (Northrup, 1979)

During the Vietnam Era, the racial turmoil seen in the civilian society spilled over into the military. Perceived injustices directed against Blacks on several naval vessels in 1972 led to racial tension and even violence. The Department of Defense and the Navy responded by establishing race relations and affirmative action programs. The Navy continues to make progress in the areas of equal opportunity and race relations as evidenced by the increasing numbers of minorities in the service and in the senior ranks.

Black men were serving in the Navy 169 years before the first Black officer was commissioned in 1944. (Baldwin, 1983) On March 17, 1944, 13 Black officers, known as the "Golden 13", were commissioned as line officers in the Naval Reserve. That same year saw the commissioning of 10 Black female officers into the Women's Auxiliary Volunteer Emergency Service (WAVES). (Longo, 1988) Towards the end of World War II there were 60 Black officers on active duty, but by the end of the war there were only four still on active duty. (Baldwin, 1983)

The first Black graduated from the Naval Academy in 1949 even though Blacks had enrolled as early as 1872. (Longo, 1988). On January 31, 1962, Samuel Gravely became the first

Black officer to assume command of a ship, the USS FLAGOUT. He went on to become the first Black officer to attain the rank of Captain and then Admiral. (Baldwin, 1983)

B. HISPANICS IN THE NAVY

Hispanics have participated in conflicts since the beginning of the European presence in the Americas. Unfortunately their military history has not been well documented. In addition, Hispanics have only been identified as an ethnic group by the Navy since 1977 (Zucca, 1984). Another problem in chronicling the Hispanic experience in the military is that racial/ethnic identification of military personnel is based on self-selection on the part of the individual. Various studies have found that many individuals with Spanish surnames do not identify themselves as Hispanics--which suggests that this method of self-selection results in an undercounting of persons who may be of Hispanic origin (Eitelberg et al., 1989).

During the Civil War, Hispanics fought for both the Union and the Confederacy. Most Mexican-Americans served in regular army or volunteer units on an integrated basis, although some served in predominantly Mexican units with their own officers. The most famous Hispanic participant in the Union forces was Admiral David G. Farragut, who distinguished himself in the battles for New Orleans and Mobile and is best known for saying, "Damn the torpedoes. Full speed ahead." Hispanics

were also among those who served in the Rough Riders during the Spanish-American War.

Although historical records are incomplete, Hispanic Americans did participate in World War I. During this period, about one-third of the U.S. population were recent immigrants; and the likelihood was that many had little or no skill in English. Because of this, thousands of the estimated 3.8 million men who were drafted were found to have insufficient skill in English to complete military training. Inductees with limited or no ability in English were relegated to development battalions and assigned to menial jobs. Eventually, the language problem was identified as a barrier to training and the men were separated into language groups. Training then progressed in the native tongue of the draftees. This type of training became known as the "Camp Gordon Plan." By the time it took to identify and remedy the problem and to train the non-English speaking soldiers, the war was nearing an end and only a few saw combat.

During World War II an estimated 250,000 to 500,000 Hispanics served in the armed forces, which is approximately 2.5 to 5 percent of all persons who served during the war. With the exception of the 65th Infantry regiment from Puerto Rico, Hispanics were not in segregated units. Hispanic-Americans continue to serve their country with distinction in all the services up to the present. (Hispanics in America's Defense, 1983)

Since the Vietnam War, Hispanic participation in the active forces has remained somewhat static, showing a slight increase in the last decade only. This is in stark contrast to their rapid increase in the general population which has been five times as fast as the rest of the population since 1980. Their number has grown 53 percent and is now 22.4 million, or about 9 percent of the U.S. total population.[2] At this rate, Hispanics could overtake Blacks (30 million, or about 12 percent of the U.S. population) as the largest U.S. minority by year 2015 (Barringer, 1991).

In 1984, a workshop was sponsored by the Manpower R&D Program of the Office of Naval Research to discuss various subjects on Hispanic subpopulations and the naval service. The workshop stressed that "Hispanic Americans are not a monolithic group but, rather, a set of four or five subpopulations distinguished by degree of acculturation to the mainstream society, command of English, and beliefs and attitudes." (Sinaiko, et al., 1985) Since the growing Hispanic population is an important manpower resource for the military, a better understanding of their specific cultural attributes is a precursor to increasingly effective recruiting and retaining of Hispanic Americans in the Navy.

---

[2]These figures do not distinguish between legal and illegal residents.

C. WOMEN IN THE NAVY[3]

Women have served for and with the American Navy during the Revolutionary War, War of 1812 and Civil War. But it was not until 1908 that women were able to serve in the Navy with the establishment of the Navy Nurse Corps. During World War I the Navy authorized the enlistment of women as yeomans. By the end of the war, 11,275 "yeomanettes" had served and all were separated within a few months of the war's end.

In 1942, the WAVES (Women Accepted for Volunteer Emergency Service) was formed to relieve men from support functions ashore so they could fight the war at sea. Approximately 86,000 female enlisted and officer personnel joined the war effort and performed in both traditional (administration, intelligence expert, communicator, etc.) and non-traditional (pilot, aviation mechanic, welder, etc.) jobs. The majority of women, like their male counterparts, were mustered out of the service in 1946.

1948 saw the passage of the Women's Armed Service Integration Act which incorporated women into the Active and Reserve forces. The law limited participation of women in several respects:

- Enlisted women's strength could not exceed 2 percent of total enlisted strength,

---

[3] All of the information for this section was taken from RADM Roberta L. Hazard's keynote address to the Navy Women's National Convention, July 30, 1987, unless otherwise noted.

- Officer numbers could not exceed 10 percent of the female enlisted strength, and
- Women could command only those activities comprised primarily of women.

Institutional progress for women coincided with the turbulent political, military and social changes that occurred in the 1960's and 1970's. In 1967, Department of Defense-sponsored legislation removed the ceiling on women's numbers. Women were allowed to compete for promotion through the grade of Captain and were eligible for appointment to Flag rank.

Following conversion to the all-volunteer force, the Navy opened its doors to more women because of declining numbers of men willing to serve in the post Vietnam era. These increases were accompanied by major changes in personnel policies. These changes included ending the automatic discharge of pregnant women and those with minor dependents and providing equal family entitlements for married men and women soldiers. (Butler, 1992) The policies expanded opportunities for women, as well, allowing for more diversified assignments. Women were allowed to command shore units composed of men and women. Naval aviation was opened to women in 1972, and a pilot program was initiated to study the success of women who were assigned to ship's company on board USS SANCTUARY. Women were admitted into the senior War Colleges and some of the Staff Corps. By 1973, women were no longer managed separately within the enlisted ranks or in the URL and Staff Corps. The title "WAVES" was abolished.

In 1976, the military academies were opened to women, the first URL female Flag officer was selected and the remaining Staff and Restricted Line communities were opened to women. The Combat Exclusion Law (Title 10, Section 6015) was amended allowing women officers access to the surface warfare and special operation communities, albeit in restricted numbers. Also, enlisted women as well as female officers could be assigned to sea duty on board non-combatant auxiliary and support ships as well as Military Sealift Command ships.

In the 1980's the Limited Duty Officer program was opened to enlisted women. The process for selection to Flag rank was changed so that women, like men, are now chosen by the same selection board process.

Opportunities for women in the Navy have significantly improved in the last two decades. The final barrier to full integration, combat exclusion, continues to be debated by the military, Congress and society in general.

III. NAVY PROMOTION PROCESS

A. BACKGROUND

The military promotion system strives to ensure that adequate numbers of qualified officers in desired paygrades are available to fill vacated positions in the military hierarchy and, as a result, defines to a large extent the force structure. The system also serves as a reward for high-performing officers to ascend to positions of increased authority and responsibility. (Hansell, 1979)

The Navy's officer promotion system has undergone numerous revisions since World War II. The Officer Personnel Act of 1947 laid the foundation for today's officer personnel system and incorporated the up-or-out philosophy into the officer personnel management system. The up-or-out system provides for removal from active service, or, if eligible, retirement of an officer who has been passed over for promotion two or more times, depending on grade and number of years of service. (Hansell, 1979) The purpose of this policy is to encourage upward movement of only the best officers by providing at each rank more qualified officers than there are positions at the next higher rank (Eitelberg et al., 1989).

Various pieces of legislation were enacted following the Officer Personnel Act of 1947, including the Officer Grade

Limitation Act of 1954, which established limitations on the number of both Regular and Reserve officers who may serve on active duty in the grades of O-4 and above, temporary relief legislations in 1966, 1968, 1972, and 1974, and the Defense Officer Personnel Act of 1981 (DOPMA) (Hansell, 1979). Since 1973 the Navy's officer personnel management system has operated concurrently with the implementation of the all-volunteer force.

DOPMA, passed in December 1980 with an effective date of 15 September 1981, significantly revised the laws which govern the management of the entire Department of Defense (DoD) commissioned officer corps. It specifically addressed common provisions for accession, promotion, retention and attrition of DoD officers.

DOPMA provided for a single permanent promotion structure for each of the services. This eliminated the "running mate" system used by the Navy which linked staff officer promotions to lineal numbers in the URL. When the URL running mate was promoted, the staff officer was also promoted.

DOPMA established standardized career lengths of 30 years for captain, 26 years for commander and 20 years for lieutenant commander. The bill provides for selective-continuation procedures to allow officers who have been passed over twice for promotion to remain on active duty, depending on grade and years of service, until the normal retirement point.

DOPMA specified grade ceilings for O-4 (lieutenant commander), O-5 (commander) and O-6 (captain). These three grades are known as "control grades" and the Secretary of Defense prescribes the size of each control grade for each of the services. The Secretary of the Navy then divides these grade authorizations among each of its competitive communities. By imposing limits to the number of lieutenant commanders, commanders, and captains who could be on active duty based on the overall force, DOPMA guidelines create a pyramid force structure. (Doyle, 1989)

B. THE NAVY'S PROMOTION PROCESS

The structure of the Navy's officer corps resembles a pyramid which rises from a broad base comprised of relatively inexperienced, junior officers to the upper echelon of a few Flag officers and topped by one Chief of Naval Operations. Primarily, accessions, entries into the system, occur at or near the base creating an internal personnel flow ascending to the top of the pyramid. Realistically, all who enter this hierarchy at the bottom cannot reach the top, but each officer has the same opportunity as his/her contemporaries to reach the top grade of his/her category. (Hansell, 1979) Specifically, each rank in the military pyramid supports or "feeds" the one above it, and promotion rates are dependent on attrition rates in the grade above.

DOPMA outlined a set of minimum promotion opportunity, promotion flow points (the number of years of commissioned service at which most officers would be promoted to the next higher grade) and minimum years in grade (YIG) as specified in Table VI.

Table VI. DOPMA PROMOTION FLOW POINT, PROMOTION OPPORTUNITY AND MINIMUM YEARS IN GRADE

Grade	Flow Point in YOS	Promotion Opportunity	Minimum YIG
ENS to LTJG	2	All Qualified	18 months
LTJG to LT	4	95%	2 years
LT to LCDR	10 +/- 1	80%	3 years
LCDR to CDR	16 +/- 1	70%	3 years
CDR to CAPT	22 +/- 1	50%	3 years

Source: The Naval Officer's Career Planning Guidebook, 1990 Edition and (Doyle, 1989).

Promotion opportunities, along with the number of vacancies to be filled in each grade and individual community (competitive category), determine the number of officers eligible, or in-zone, for selection. For example, if there are 140 commander vacancies projected for the next fiscal year and the promotion opportunity is set at 70 percent, 140/0.7 or 200 officers in the grade of lieutenant commander would be in the promotion zone.

Annually naval promotion planners start the promotion process by determining the projected need for officers in each grade within each of the competitive categories (i.e., Line,

Staff). Three factors are used in the process: authorized officer strength, promotion flow point and promotion opportunities. These factors are interrelated and a change in one will force a change in at least one of the others. (Doyle, 1989)

IV. DATA AND METHODOLOGY

A. DATA

Data from fiscal years 1975 through 1992 were obtained from the Officer Personnel Information System (OPIS) database which is maintained by the Navy Personnel Research and Development Center (NPRDC), San Diego, CA. OPIS is an aggregate data file extracted annually from the Officer Master File and consists of inventories and personnel flows, such as lateral movements, promotions, losses, etc. OPIS is arranged by count or frequency of record per fiscal year. Inventory and promotion data, arranged by community, ethnic group and gender, were extracted for use in computing personnel flows. The OPIS variable codes used in this study are listed in Appendix A.

OPIS is uniquely configured to study personnel data within a system. OPIS groups officers with the same characteristics into aggregate files or bins. However, because of this aggregation, OPIS cannot track an individual officer from bin to bin.

There are two characteristics of OPIS that can affect computed continuation rates. First, OPIS does not count losses and gains that occur in the same year. For example, an individual who enters the system during a particular year and

then leaves during that same year will not be counted as a loss or gain by OPIS. Second, OPIS does not recognize a change in year group caused by early promotion, per se. Rather, OPIS recognizes the early promotee's record by advancing it one year in YOS to match that of the new peer's year group. For instance, if an early promotee's record should have been counted in YOS 16 it will instead be counted in YOS 17 to give credit for one year's seniority which is equivalent to changing year groups. These two idiosyncracies can have an effect on the computation of continuation rates, but the effect is postulated to be negligible.

B. WORKING DEFINITIONS

1. Year Group (YG).

An officer's year group is determined by the fiscal year in which he/she is commissioned.

2. Years of Service (YOS).

Years of service is the number of years of active commission time served to date by an officer and is computed from the active commission base date. YOS in this study will be computed as the current fiscal year (FY) minus the officer's year group (YG). **YOS = FY - YG**

3. YOS/Grade Category

The YOS/grade category is the cell in a matrix at which point the YOS row and paygrade column intersect.

4. Inventories.

Inventories are the number of officers on active duty in each YOS/grade category at the beginning of a fiscal year. These beginning inventories, or stocks, are used to compute both promotion and attrition rates.

5. Losses.

Loss refers to the total loss of individuals from a system for whatever reason. In this study, a loss is defined as any officer leaving the community during a FY from among those who were there at the beginning of the FY. Officers who transfer out of one community but do not leave the Navy will also be counted as losses for purposes of this study. Losses will be computed as the difference between inventories in successive YOS categories of the same YG.

6. Lateral Transfer

A lateral transfer is a movement of an officer from one community to another, as such it is included in the losses of the originating community. Refer to section E.1.c. of this chapter for a more detailed explanation of the effect of lateral transfers on loss and promotion rates.

C. COHORT ANALYSIS

1. Cohort Analysis

A cohort is any group of individuals who join an organization (system) at about the same time. Cohort analysis, then, consists of tracking that group as it moves

through the system. In this study, each year group within a community/ethnic or community/gender category is a cohort and they are observed as to their loss and promotion behavior in the system. Typically, over a period of time the number of personnel remaining in the cohort will decrease due to losses. In this system each person may make one of three transitions during a period of one year:

- move to the next YOS but stay in the same grade;
- move to the next YOS and the next higher paygrade;
- move out of the system.

2. Loss Rates

"Of all the flows in a manpower system, [loss] is the most fundamental for manpower planning" (Bartholomew et al., 1991). Loss is partially under the control of management as a result of the up-or-out policy in the Navy, but as a whole it is outside management's control as a result of all the individual decisions to leave. Within the Navy manpower system, the number of jobs is controlled. Therefore opportunities for promotion and recruitment are created by vacancies resulting mainly from losses. Measures of loss, then, can be used as indicators of organizational health. (Bartholomew et al., 1991) Here, they will be used to compare the "health" of various cohorts.

3. Promotion Rates

Opportunities for promotion are created by vacancies resulting from losses. On the other hand, the promotion system in the Navy attempts to ensure that the right number of qualified people are available to fill those vacated positions within the military hierarchy.

The promotion rate, in this study, is computed by dividing the number of officers promoted to the next grade in a YOS/grade category by the beginning inventory in the YOS/grade category. For example, if there are 200 lieutenants in YOS 10 and 160 of them are promoted to lieutenant commander then the promotion rate for the lieutenant grade/YOS 10 category is 160/200 or 0.80.

D. METHODOLOGY

The Statistical Analysis System (SAS) program was used to convert OPIS fiscal year records into year group records. Matrix tables by YOS and paygrade were constructed showing inventories and promotion data for each year group by designator and by ethnic group or gender. The inventory data were imported into the spreadsheet software program, Quattro Pro. Promotion and attrition rates were computed using the spreadsheet program. Data inconsistencies, defined as data not consistent with time in grade or time in service requirements, occurred occasionally and were deleted from the inventory tables. For instance, the surface community, white

ethnic inventory table for YG 1987 showed 41 admirals at YOS 3. The 41 admirals were considered to be an anomaly since the minimum time in service requirement was not met for this grade. Therefore they were deleted from the inventory total for YOS 3. Figures 1 and 2 are examples of SAS generated inventory and promotion tables for YG 1983, surface community, white ethnic group. The promotion tables reflect the number of promotions to the paygrade at the top of the column.

YOS	ENS	LTJG	LT	TOTAL
1	937	0	0	937
2	1018	0	0	1018
3	6	1022	0	1028
4	1	903	0	904
5	0	43	640	683
6	0	0	565	565
7	0	0	471	471
8	0	0	391	391
9	0	0	343	343

Figure 1 Example of Inventory Matrix of YG 1983 Surface Community, White Ethnic Group

YOS	LTJG	LT
2	1016	0
3	2	0
4	0	639
5	0	19

Figure 2 Example of Promotion Matrix of YG 1983 Surface Community, White Ethnic Group

E. DETERMINATION OF LOSS AND PROMOTION RATES

In order to study the career patterns of the cohorts in terms of loss and promotion rates, the analysis was carried out in three stages. The first stage computed the individual YOS rates for each year group cohort. Since the itemized accounting of rates in the first stage was too detailed to observe trends, it was decided to compute average rates across year groups for each YOS in the second stage. The analysis of these average rates focused on rate trends by YOS but it also proved to be difficult to analyze ethnic and gender differences. In the final stage YOS cells were grouped by career milestones thereby creating six or seven significant career periods within a career for each particular community. Then rates were computed for each significant period, for each year group. Average rates across year groups for each significant period were also computed so as to provide an averaged baseline against which to compare year group rates. A more comprehensive explanation of these stages is given in the following sections.

1. Individual Rates by YOS and YG

a. Loss Rates

Loss rates were computed for each YOS within a YG cohort. Referring to Figure 1, the loss rate for YOS 4 is computed as the total loss occurring between the beginning inventory total of YOS 4 and the beginning inventory total of

YOS 5 divided by the beginning inventory total of YOS 4. This equates to (904-683)/904 or 0.244 which is interpreted as a 24.4 percent loss rate occurring in YOS 4. Rates for all YOS's were computed in this manner for each year group.

Inventory and loss data for each of the matrices were consolidated into tables by community and ethnic or gender group. Appendix B contains inventories and Appendix C contains losses. Loss rates were similarly consolidated and are provided in Appendix F.

b. Promotion Rates

The promotion rates were computed by using both the inventory and promotion matrix tables. For example, in Figures 1 and 2, the number of lieutenants junior grade who were promoted to lieutenant during their YOS 4 was 639. This number was then divided by the inventory of lieutenants junior grade in YOS 4 or 903. The ratio equates to a promotion rate of 639/903 or 0.708. Therefore, 70.8 percent of the lieutenants junior grade in YOS 4 were promoted to lieutenant.

Occasionally, promotions occurred in two grades in the same YOS. In these cases, only the promotion rate for the higher grade was computed. Being promoted early to the higher grade rather than late to the lower grade reflects a more significant aspect of career progression. Appendices D and E contain promotion-eligible and promotion data, respectively. Promotion-eligibles are those officers in a YOS/grade category

who can be promoted to the next grade. In the example, above the promotion-eligible inventory is 903 which is the number of lieutenants junior grade in YOS 4 who can be promoted to lieutenant. Appendix G contains the promotion rates.

c. Effect of Lateral Movement on Loss and Promotion Rates

Personnel flows within a cohort involve the entering and leaving of individuals within YOS categories. As a result, inventory levels can increase or decrease from one YOS to the next depending on the amount of lateral movement, losses, and gains that occur. Losses include such factors as leaving active duty or the Navy altogether (for whatever reason), death, or transferring into another community. OPIS has separate loss and transfer in/out files, but the transfer data proved to be inconsistent when compared to the inventory data so these files were not used. Instead, losses were computed from the inventory file as the difference between successive YOS within a cohort. Any transfers into the community cohort could then offset or even overwhelm the number of transfers out of the community and thereby diminish the total effect of losses in terms of a loss rate. In some cases the inventory level actually increased from one YOS to the next one.

In theory, officers may laterally move between communities at any time, but generally transfers occur in the

early YOS's (1-6) before one's career path is fully entrenched. It is possible then that the true loss rate, especially in the early YOS categories, is underestimated. However, because this study focuses on community representation, the objectives will be met by analyzing the net effect between successive YOS categories. Figure 1 (refer to section D) also illustrates that if the inventory levels increase from one YOS to the next then the loss rate is taken to be zero

Promotion rates are similarly affected by lateral movement in and out of the community. OPIS records all promotions that occur in a YOS/grade category and any officers that transfer into the community after the beginning of the fiscal year will be included in the promotion file. Since promotion rates are computed by dividing the number of promotions to the next grade in a YOS/grade category (as obtained from the OPIS promotion file) by the number of officers in that YOS/grade category, the number of officers that are promoted could reflect a higher number than what was there at the beginning of the year. For example, there is a high incidence of lateral transfers in the GenURL community, especially in the early years of service. As such, it is not uncommon to have a promotion rate that exceeds 100 percent for promotion to lieutenant junior grade amongst some of the cohorts.

2. Average Rates by YOS

An average rate across all year groups available was computed for each YOS. The average rate can be used as a reference to compare the individual year group rates in order to determine how much promotion or loss rates were changing across year groups.

The estimating of a single set of rates over several year groups is accomplished by computing the ratio of total losses over the total inventories. For example, for the year groups 1972 through 1987, the average loss rate for YOS 4 in the surface community, white ethnic group (refer to Appendices B and C) was computed by dividing the sum of all losses occurring by the sum of all inventories as shown below:

$$\frac{227+223+174+259+229+180+169+250+345+289+293+221+186+361+311+357}{1060+902+864+1102+1037+1131+968+1078+1090+993+1109+904+845+1270+1122+1217}$$

$$= \frac{4074}{16,662}$$

$$= 0.245$$

The average promotion rate is similarly computed using promotion-eligible data in the denominator and promotion data in the numerator. Promotion rates were restricted to single grade promotions in each year of service in order to keep separate, for instance, promotion rates to LTJG and promotion rates to LT in YOS 3. Whenever such overlaps in promotions occurred, only the promotion rate to the higher grade was computed. Loss rates and promotion rates averaged across year groups are included in Appendices H and I, respectively.

3. Milestone Period Rates

Finally, to further examine career prospects, rates were combined to reflect six or seven significant YOS periods within each community. These periods were selected to reflect significant milestones within the career path of each community. For that reason they will be referred to as "milestone periods." Promotion windows, loss rate trends, leadership tours, end of obligatory requirements, retirement, etc., provided the framework in which to formulate these milestone periods. The 1990 edition of The Naval Officer's Career Planning Guidebook and discussions with officers in the various communities analyzed were used in defining the periods. The "Officer's Guidebook" contains figures depicting the professional development paths for each community and was the primary source used for this purpose. As the "Officer's Guidebook" points out, the figures "are included only to illustrate the general progression of assignments and promotions which [an officer] can expect. No two officers will follow identical career patterns; however, on the average, the successful [officer] will meet most of these career milestones in about the same sequence indicated." While this type of classification into milestone periods may oversimplify the normally complex career path of a naval officer, it serves the purpose of focusing on loss and promotion rates during critical junctures and thereby highlighting differences in those rates.

Combined rates were computed by milestone period for each year group. Also, rates were averaged for each milestone period across several year groups. These rates were calculated in the same manner as the average rates in Section 2 above. Loss rates and promotion rates by milestone period averaged across year groups are contained in Appendices J and K, respectively. Loss rates and promotion rates by milestone period and year group are contained in Appendices L and M, respectively.

a. Milestone Periods for Surface Warfare Community

The career path for the Surface Community (which includes both conventional and nuclear surface career paths) was broken down into seven milestone periods as follows:

Milestone Period	Years of Service	Year Groups
1	1 - 2	1975 - 1989
2	3 - 6	1973 - 1985
3	7 - 11	1969 - 1980
4	12 - 17	1964 - 1974
5	18 - 20	1960 - 1971
6	21 - 26	1960 - 1965
7	27 - 30	1960 - 1961

The year groups involved in the computations for each milestone period are also shown above. Not all of the year groups could be used in each milestone period because of the obvious limitations on data availability for all the year groups.

Milestone period 1 is characterized by a period of initial training. This training includes Surface Warfare

Officer's School and follow-on training for Engineering Officer of the Watch, Nuclear Power School or functional training related to specific billet assignments, as applicable. YOS 2, which is included in this milestone, is a period that overlaps both training and the first sea tour. Since it also covers a promotion period from ENS to LTJG, it is included in this first milestone period to distinguish it from the LTJG/LT tour in milestone period 2.

Milestone period 2 involves the significant events of the first sea tour, division officer tour and promotion to LT. It also includes the end of the typical four- or five-year, initial obligatory service incurred by the majority of officers and the screening process for department head.

Milestone period 3 includes further training (department head, graduate education, etc.), the department head tour afloat, and promotion to LCDR.

Milestone period 4 contains the XO afloat tour, promotion to CDR, and major shore tour.

Milestone period 5 contains the CDR command tour and the 20-year retirement period of eligibility. At this point, LCDRs denied continuation generally retire from the Navy.

Milestone period 6 involves significant tours ashore, promotion to CAPT, and major command tours.

Milestone period 7 continues with major command and shore tours leading to selection to Admiral.

b. Milestone Periods for General Unrestricted Line (GenURL) Community

The General Unrestricted Line community provides the Navy with a community of officers who manage the fleet support establishment. Their career path was divided into seven periods as follows:

Milestone Period	Years of Service	Year Groups
1	1 - 2	1975 - 1989
2	3 - 6	1973 - 1985
3	7 - 11	1969 - 1980
4	12 - 16	1964 - 1975
5	17 - 20	1960 - 1971
6	21 - 25	1960 - 1966
7	26 - 30	1960 - 1961

The year groups involved in the computations for each milestone period are also given above:

Milestone period 1 includes the initial period of training related to specific billet assignments, partial first tour and promotion to LTJG.

Milestone period 2 involves the division officer tour, end of obligatory service requirements and promotion to LT.

Milestone period 3 contains the department head tour, promotion to LCDR and screen for XO.

Milestone period 4 includes the XO tour, promotion to CDR, and commander command screen.

Milestone period 5 consists of the CO tour, 20-year retirement period of eligibility and promotion to CAPT.

Milestone period 6 contains major shore command and also CAPT promotion.

Milestone period 7 continues with major command and shore tours leading to selection to Admiral.

c. Milestone Periods for Aviation Warfare Community

The career path for the Aviation Warfare Community which includes pilots, NFOs and aviation generalists was broken down into six milestone periods as follows:

Milestone Period	Years of Service	Year Groups
1	1 - 2	1975 - 1989
2	3 - 7	1973 - 1984
3	8 - 12	1968 - 1979
4	13 - 18	1963 - 1973
5	19 - 25	1960 - 1966
6	26 - 30	1960 - 1961

The year groups involved in the computations for each milestone are also given above:

Milestone period 1 includes the initial student pilot or NFO training and follow-on training at the Fleet Readiness Squadron. It also covers the promotion cycle from ENS to LTJG.

Milestone period 2 covers the significant events of the first squadron tour, division officer tour, shore tour and the end of obligatory service for flight training. It also includes the LT promotion.

Milestone period 3 involves follow-on sea tours with emphasis on the squadron department head tour. This period covers the LCDR promotion.

Milestone period 4 includes promotion to CDR, screen for command and squadron XO/CO tour.

Milestone period 5 contains major sea or shore command and senior shore tours. It also includes promotion to CAPT and the 20-year retirement period of eligibility.

Milestone 6 continues with major command and shore tours leading to selection to Admiral.

d. Milestone Periods for Submarine Warfare Community

The Submarine Warfare Community consists of nuclear trained submarine officers and general submarine officers (GSO). Their career path was divided into seven periods as follows:

Milestone Period	Years of Service	Year Groups
1	1 - 2	1975 - 1989
2	3 - 7	1973 - 1984
3	8 - 12	1968 - 1979
4	13 - 16	1963 - 1975
5	17 - 20	1960 - 1971
6	21 - 24	1960 - 1967
7	25 - 30	1960 - 1961

The year groups involved in the computations for each milestone period are also given above:

Milestone period 1 includes the initial training period (nuclear power school, nuclear prototype training, submarine officer basic course and, prior to 1985, GSO training) and promotion to LTJG.

Milestone period 2 covers the first sea tour, division officer tour, shore tour and the end of the

obligatory service requirement. It also includes promotion to LT and screen for department head (after 1985).

Milestone period 3 involves the department head sea tour, promotion to LCDR and screen for XO.

Milestone period 4 includes the XO sea tour, promotion to CDR and screen for CO.

Milestone period 5 includes CO tour, promotion to CAPT and the 20-year retirement period of eligibility.

Milestone period 6 covers senior shore and major command tours and also promotion to CAPT.

Milestone period 7 continues with major command and senior shore tours leading to selection to Admiral.

V. ANALYSIS

A. INTRODUCTION

The oldest of the four communities studied, the Surface Warfare community, has a long and established career path, substantial population sizes throughout the year groups and years of service (primarily with the White ethnic group) and reasonably good ethnic representation. For these reasons, the surface community was studied and analyzed first in order to develop the methodology. The General Unrestricted Line community is presented second because of its strong gender representation, followed by the Aviation and Submarine communities.

1. Analysis of Rates

This chapter is organized by community as described in the preceding chapter and further broken down by analysis of the various types of loss and promotion rates for the ethnic (Black, Hispanic) and gender (female) groups considered. Data and supporting graphs used in the analysis are included in Appendices H through Q and will not be individually referenced in the subsequent sections.

An analysis of loss rates averaged across year groups is included for every year of service because losses do occur in every year of service. On the other hand, promotions occur

mostly during "windows", and, therefore, it is best to analyze them by milestone period only. However, promotion rates averaged across year groups are included in Appendix I for general reference.

2. Effect of Population Size on Analysis

Unfortunately, the breakdown of communities by year groups and by ethnic or gender classification often reduces the community cohorts into very small populations. As the cohorts increase in age they continue to decrease in size because of losses and can eventually reach a size not conducive to statistical study. Generally, the rates are considered to be inadequate for further analysis when the population size used in computing the rates falls into a range somewhere below five or ten. Nevertheless, even these rates are included in the study, in order to establish a methodology and provide background data for possible future studies. Conclusions, however, will not be drawn about rates whenever the population size drops below that level.

B. ANALYSIS OF SURFACE WARFARE COMMUNITY

Available inventory levels do not reach above ten until YG 1970 for Black officers and YG 1977 for both Hispanic and female officers. Each milestone period reflects a promotion rate to one paygrade only. Specifically, period 1 includes promotion to LTJG, period 2 to LT, period 3 to LCDR, period 4 to CDR, periods 5 and 6 to CAPT and period 7 to Flag.

1. Black Officers

a. Black Loss Rates

Comparing loss rates for Black officers to those of White officers for each year of service averaged across available year groups, it appears that Black officers have higher loss rates in the first three years of service and then have lower loss rates for the next four years of service. Black loss rates are higher again for YOS 8-11 and then alternate from YOS 12 to 15 between higher and lower rates than Whites. Starting with YOS 15, Blacks show again higher loss rates up through YOS 24 except for YOS 20 and 22. Beyond YOS 24 population sizes become too small to draw any conclusions.

The loss rates, as grouped into milestone periods indicate that Blacks experience somewhat higher loss rates during the initial training period (milestone period 1), during the "department head tour" (milestone period 3) and during the "XO period" (milestone period 4). Blacks have lower loss rates during the "division officer tour" (milestone period 2). In addition, they have lower rates during milestone periods 5 and 6 as well. Milestone 7 has too small of a population to warrant conclusions.

Comparing individual year group milestone loss rates for milestone period 1 shows that Blacks have higher loss rates than White officers in every YG except 1975, 1978,

1979 and 1989. In milestone period 2 Blacks have lower loss rates in all year groups except 1973, 1974, 1981 and 1985. Milestone periods 3 and 4 show no discernable increasing/decreasing trends from one year group to the next. Milestone period 5 shows a consistently lower rate pattern in the last three year groups studied (1969 - 1971) for Blacks compared to Whites. Milestone period 6 and 7 have small population sizes and analysis was not conducted.

b. Black Promotion Rates

Overall, Blacks demonstrate lower average promotion rates in milestone periods 1, 3 and 4 than those of White officers. Blacks have comparable average rates in milestone period 2 and substantially higher rates in milestone periods 5 and 6. However, the small population size in milestone period 6 may be artificially inflating the promotion rate. Analysis of milestone period 7 could not be accomplished because of small or nonexistent populations.

In milestone period 1, Blacks have slightly but consistently lower promotion rates than Whites with the exception of YGs 1975, 1978, 1979 and 1987. The promotion rate for Blacks in milestone period 2 fluctuated from being lower in YGs 1973 and 1974, then higher in YGs 1975 - 1978, then lower in YGs 1979 - 1982, then higher in YG 1984, ending lower in YG 1985. The promotion rates for milestone period 3 are higher for YG 1970 through YG 1975 and are lower for the

last five year groups studied (1976 - 1980) with the notable exception of YG 1979. The rates in milestone period 4 do not appear to follow a trend. Analysis for milestone periods 5 - 7 was not conducted because of small population sizes.

2. Hispanic Officers

a. Hispanic Loss Rates

Average Hispanic loss rates are higher than those of White loss rates in the first six years of service except for YOS 4. The rates are lower for YOS 7 through 10 except for YOS 9 and then are higher for the next three years of service. No losses appear to occur in YOS 14, 16 and 17 probably because of small inventory figures. Higher rates are registered in YOS 15, and 18-21; however, the number of officers in these categories is small.

Hispanics show the same pattern as Surface Warfare Blacks for the first three milestone periods in that they have higher loss rates during milestone periods 1 and 3 and lower loss rates in milestone period 2. They differ in milestone period 4, where Hispanics show a slightly smaller loss rate as compared to White officers. Milestone 5 indicates a significant increase in loss rate, although the population size in milestones 5 through 7 are very small, which probably is inflating the loss rate.

Hispanic loss rates are unevenly distributed throughout the year groups as compared to White loss rates for

milestone period 1. Between YGs 1980 and 1985, Hispanics have higher loss rates with the exception of YG 1982, but since YG 1986 they show no losses. In milestone period 2 they had substantially lower rates for YGs 1974 - 1977. YGs 1978 - 1981 show higher rates. In the last four year groups studied (1982 - 1985), Hispanics have lower rates, with the exception of YG 1983. In milestone period 3, Hispanics appear to have substantially higher loss rates in YGs 1970 to 1972, but this is probably due to small population sizes. From YG 1975 to YG 1980, they have higher loss rates except for YGs 1977 and 1979. Milestone periods 4 through 7 have small population sizes and therefore analysis was not conducted.

b. Hispanic Promotion Rates

Hispanics show lower promotion rates in milestone periods 1, 3, 4, and 5. They have a slightly higher promotion rate in milestone period 2. The notably higher promotion rate in milestone period 6 is probably due to a small population size. Analysis of milestone period 7 could not be accomplished because of small or nonexistent populations.

In milestone period 1, Hispanics have higher or even rates compared to White rates in YGs 1976 -1982. In YGs 1983 - 1986, they have lower or even rates as in the case of YG 1984. In the last three year groups studied (1987 - 1989), the rates are higher. In milestone period 2, the rates are distributed unevenly with no discernable trend noted. The

rates are higher in YGs 1972 - 1974 but then, with the exception of YG 1976, are all lower than White rates in the last six year groups studied (1975 - 1980). Analysis of milestone periods 4 - 7 was not conducted because of small population sizes.

3. Female Officers

a. Female Loss Rates

Comparing loss rates for each year of service as averaged across year groups, Surface Warfare females experience higher loss rates in the first two years of service but show substantially lower rates for YOS 3 through YOS 6 as compared to male officers. At YOS 7-9 the rates are substantially higher, then return to levels below those of males for YOS 10 and 11. YOS 12-15, except YOS 14, show higher rates, but the population size is small. Beyond YOS 15 loss rates appear to be nonexistent, because of small or zero population size.

Overall, female officers have higher loss rates in milestone periods 1 and 3 and a lower loss rate in milestone period 2. Milestone periods 4 - 7 were not analyzed because of small population sizes.

Comparing the individual year group milestone loss rates for female officers to male officers for milestone period 1, female officers do not show an increasing or decreasing trend from one year group to the next. Whereas, in

milestone period 2, females have lower loss rates, the rates for more recent year groups are increasing over time. In milestone period 3, loss rates increase from YG 1974 to YG 1976, and then show a decreasing trend from YG 1978 to YG 1980.

b. Female Promotion Rates

Female Surface Warfare officers have higher promotion rates than their male counterparts in milestone periods 1 and 2. However, these two milestone periods are comprised of YOS categories that are affected by lateral transfers into the community, as can be observed in the inventory tables (Appendix B). This effect may have an influence on the rates by artificially inflating them. Milestone period 3 rates are comparable to male rates, whereas milestone period 4 shows a lower rate for females. Because women have only been in the community since the mid 1970's they have not been around long enough to be present in the senior paygrades in sufficient numbers to warrant analysis beyond milestone period 3.

In milestone period 1, the promotion rates in YGs 1978 - 1979 are artificially high as a result of lateral transfers into the community. Higher and lower rates for females are about equal through YGs 1980 - 1989. In milestone period 2, the "transfer effect" is also seen in YGs 1976 - 1978. With the exception of YG 1984, females have higher

promotion rates in YGs 1976 - 1985. However, the population size is too small in YGs 1975 or earlier to warrant analysis. In milestone period 3 females have higher promotion rates in the last five year groups studied (1976 - 1980). Analysis was not conducted for milestone periods 4 - 7 because of small population sizes. YG 1975 has a substantially lower promotion rate for female officers as compared to their male counterparts in that year group. Rates in YGs 1974 and earlier have small or zero population sizes that precludes further analysis.

4. Summary

The results indicate Black officers have higher loss rates and lower promotion rates compared to White officers in milestone periods 1, 3 and 4 in the Surface community. Hispanic officers have higher loss rates and lower promotion rates compared to White officers in milestone periods 1, 3 and 5, as well as, lower promotion rates in milestone period 4. Female officers have higher loss rates in milestone periods 1 and 3 and lower promotion rates in period 4 compared to male officers.

C. ANALYSIS OF GENERAL UNRESTRICTED LINE COMMUNITY

The Black population size in the GenURL community did not reach a value of ten or higher until YG 1972. Only three year groups, 1985, 1986 and 1989, had an Hispanic population of ten or greater. Eight of the year groups prior to 1972 had no

representation and the remaining four had a population size of one. The GenURL community has historically consisted of mostly women, thus the male population becomes the "minority" in this community. Five year groups, 1960 - 1963 and 1966, have available inventories of male officers less than ten. (1962 also has a female population size of less than ten.)

Each milestone period reflects a promotion rate to one paygrade only. Specifically, period 1 includes promotion to LTJG, period 2 to LT, period 3 to LCDR, period 4 to CDR, periods 5 and 6 to CAPT and period 7 to Flag.

1. Black Officers

a. Black Loss Rates

Average loss rates across year groups for the GenURL community indicate that Black officers have lower rates for the first seven years of service as compared to White officers. The rates alternate from YOS 8 to YOS 14 with YOS 11 showing a substantially higher loss rate compared to White officers in that category. From YOS 15 to YOS 20 Blacks experience no loss rates except for large peaks at YOS 16 and YOS 20. The population size diminishes or is nonexistent beyond YOS 20 and therefore precludes further analysis.

The loss rates, as grouped into milestone periods, indicate that Blacks experience lower rates during the first two milestone periods. For the next two milestone periods, periods 3 and 4, Blacks have higher loss rates relative to

White officers. Black loss rates are substantially lower than those of White officers in milestone period 5 and then increase to above the rate of White officers in milestone period 6. Analysis was not conducted for milestone period 7 because of small population sizes.

Comparing individual year group milestone loss rates for milestone period 1 shows that Blacks experience losses in only five of the 15 year groups included in the computations as compared to White officers. Of those five year groups that show losses, two year groups have lower rates, (YGs 1981, 1982) and two year groups have higher rates (YGs 1984, 1986). In milestone period 2, loss rates for Black officers were lower in every year group except YG 1979, as compared to White officers. The population sizes become too small in each year group for milestone periods 4 - 7 to continue analysis.

b. Black Promotion Rates

In comparing promotion rates, averaged across year groups in the milestone periods, Black officers have higher promotion rates in the first two periods as compared to White officers. Blacks appear to have lower promotion rates in milestone periods 3 and 4 and then have a higher rate in milestone period 5. There is a zero promotion rate for Black officers in milestone period 6; however, both milestone periods 6 and 7 have small or zero population sizes.

As for the promotion rates among the various year groups in milestone period 1, Black officers have higher rates than White officers in every year group studied except for YG 1989. The last three year groups indicate a decreasing trend in promotion rates as compared to an increasing trend noted in White promotion rates. In milestone period 2 Black officers have higher promotion rates in nine of the 13 year groups for which promotion rates were computed, with no increasing or decreasing trend noted. Of the last five year groups used in the computations for milestone period 3, Black officers have substantially lower promotion rates in four of the year groups (YGs 1976, 1978 - 1980). Prior to YG 1976, Blacks have higher promotion rates in four of six year groups studied. In milestone period 4, the promotion rate for Black officers fluctuated between YG 1970 and YG 1975 and were lower in four of these six year groups. Analysis was not conducted for year groups prior to YG 1970 due to small population sizes. Also, analysis was not conducted for milestone periods 5 - 7 because of small population sizes.

2. Hispanic Officers

a. Hispanic Loss Rates

Initially, Hispanics show no loss at YOS 1 (probably because of the "transfer effect") but then have higher loss rates for the next twelve years of service except for a significant lower rate at YOS 5 and a zero loss rate at

Beyond YOS 12, the population size is too small to continue analysis.

Comparing milestone period loss rates between Hispanic and White officers, Hispanic loss rates alternate between slightly higher rates in milestone period 1, slightly lower in milestone period 2 and then slightly higher again in milestone period 3. Milestone periods 4 - 7 have small population sizes that preclude further analysis.

The small Hispanic population in the GenURL community (only three year groups had inventories of ten or more officers) made analysis of milestone loss rates for each of the year groups difficult. In milestone period 1, Hispanics have higher loss rates than White officers in YGs 1977 - 1981, however, these year groups have small population sizes. From YG 1982 to YG 1989, Hispanics have zero loss rates except for YG 1985 and YG 1989, which have higher rates than White officers in those year groups. In milestone period 2, higher/lower loss rates are distributed across the year groups with no trend noted. Loss rates in milestone period 3 reflect small population sizes in the year groups studied, and no conclusions can be made as a result.

b. Hispanic Promotion Rates

Hispanic officers initially have higher promotion rates in milestone period 1 and then have slightly lower promotion rates in the next milestone period as compared to

White officers. They then have higher rates in milestone period 3 but fall below the rates of White officers in milestone period 4. Beyond milestone period 4, the population size becomes too small to continue analysis.

Comparing Hispanic promotion rates across the year groups in milestone period 1, shows that Hispanics have either higher rates or rates that are only slightly below those of White officers in almost every year group with the exception of YG 1978, which has a substantially lower rate. (YG 1988 has no Hispanic population). In milestone period 2, higher/lower promotion rates alternate between the first half of the year groups studied and then show a period where Hispanic promotion rates are consistently lower (YGs 1981 - 1984). YG 1985 has a notably higher Hispanic promotion rate as compared to White officers in this milestone period. The population sizes become too small in the remaining milestone periods to warrant further analysis.

3. Female Officers

a. Female Loss Rates

Female officers have lower average loss rates in every year of service except YOSs 20 and 25-27 as compared to the minority male officers. Analysis was stopped at YOS 28 because of small male population sizes. The corollary to these findings is that males have substantially higher loss rates in almost every YOS in the GenURL community.

Female officers show lower loss rates in every milestone period except for period 7. Female and male loss rates are substantially different in milestone periods 2, 3, 4 and 6.

Examining the breakdown of gender loss rates by year group in milestone period 1, shows that females exhibit loss rates in every year group, whereas males have loss rates in only seven of the 15 year groups used in the computations (YGs 1975, 1976, 1980, 1982, 1983, 1988 and 1989). However, females have lower loss rates, overall, when averaged across year groups, with higher loss rates in only two year groups (YGs 1976, 1980). In milestone period 2, females have a fairly consistent loss rate across all year groups and, without exception, have lower loss rates than their male counterparts. Males, on the other hand, show an increasing trend in loss rates in the last four year groups studied (YGs 1982 - 1985). In milestone period 3, females, again, have substantially lower loss rates in every year group studied as compared to male officers. Overall, female officers experience small loss rates during milestone period 4 and, except for YGs 1965 - 1967, they have lower rates than male officers. In milestone period 5, female officer loss rates are fairly consistent except for a peak at YG 1966. Of the ten year groups studied in milestone period 5, female loss rates are higher than male loss rates in only three year groups (1966, 1968, 1970). The loss rates fluctuate in size

from one year group to another. In milestone period 6, female officers have lower loss rates in every year group except YG 1960, in which the rates are even with those of male officers. In milestone period 7 females have a slightly higher loss rate than male officers in one of two year groups studied (YG 1961). The other year group (YG 1960) had a zero population of both male and female officers.

b. Female Promotion Rates

Comparing milestone period promotion rates with male officers, shows that females have higher promotion rates in six of the seven milestone periods, the exception being the first milestone period. The first milestone period generally experiences numerous transfers of males into the community, and the higher promotion rate for males during this period may be influenced by this "transfer effect".

In milestone period 1, females have lower promotion rates in eight of 15 year groups studied. A trend is beginning to develop over the last three year groups (1987 - 1989), however, where the rates for males and females are about equal. In milestone period 2, promotion rates for females are higher in nine of 13 year groups studied with the difference between male and female rates being noticeably large in the last four year groups studied (1982 - 1985). Female officers have dramatically higher promotion rates than their male counterparts in every year group in milestone

period 3. In milestone period 4, higher/lower female promotion rates alternated from YG 1964 to YG 1967. Then, from YG 1968 to YG 1975 (the last eight year groups used in the computations), females have substantially higher promotion rates than males. Early promotion to Captain is contained in milestone period 5, and in that period promotions occurred in only three year groups for females (1967, 1969, 1970) and did not occur in any year groups for males. There is an overall decreasing trend in promotion rates for females in milestone period 6, but they have higher promotion rates than males for five of seven year groups. Males have slightly higher promotion rates in YGs 1964 and 1966. Analysis of milestone period 7 was not conducted because of small population sizes.

4. Summary

In the GenURL community, Black officers have higher loss rates and lower promotion rates compared to White officers in milestone periods 3 and 4, as well as, in milestone period 6, although period 6 has a small population size. Hispanic officers have higher loss rates compared to White officers in milestone periods 1 and 3 and lower promotion rates in periods 2 and 4. Female officers have higher loss rates in period 7 and lower promotion rates in period 1 compared to male officers. An opposite view to this finding is that male officers have higher loss rates and

corresponding lower promotion rates in milestone periods 2, 3, 4, 5 and 6.

D. ANALYSIS OF AVIATION WARFARE COMMUNITY

Available inventory levels for Black officers in the Aviation community first reached a size of ten in YG 1972. The Hispanic population size was greater than ten in only YGs 1975 and 1977 and continued above ten from YG 1980 on. The population size for females was at or greater than ten commencing with YG 1977.

Each milestone period reflects a promotion rate to one paygrade only. Specifically, milestone period 1 includes promotion to LTJG, period 2 to LT, period 3 to LCDR, period 4 to CDR, period 5 to CAPT and period 6 to Flag.

1. Black Officers

a. Black Loss Rates

Black officers in the Aviation community have higher average loss rates in the first five years of service with the rates in YOSs 1-3 being substantially higher than those of White officers. The rates become lower in the next three years of service (6-8). From YOS 9 to YOS 16, the rates are higher with the exception of YOS 12 and YOS 17. The rates then alternate with YOS 20 showing a substantially higher loss rate than that of White officers in the same year of service.

Analyzing milestone period loss rates shows that Black officers have a substantially higher rate as compared to

White officers in milestone period 1 and have slightly higher rates in milestone periods 2 and 3. The loss rate is again higher for Blacks in milestone period 4. Milestone period 5 shows lower Black loss rates than those of White officers. Blacks have a zero population size in milestone period 6.

In milestone period 1, Blacks have higher loss rates as compared to White officers in every year group studied except for YG 1988. While White loss rates remained somewhat consistent throughout the year groups, Black loss rates cycled from a high in YG 1975, then decreased down through YG 1883 and then increased through YG 1987. YGs 1988 and 1989 have smaller loss rates compared to all other Black year group loss rates in this milestone period. In milestone period 2, Blacks have higher loss rates compared to White officers in eight of 12 year groups included in the rate computations. YGs 1975, 1976, 1979, and 1980 are the exception and the rates in these year groups are notably lower than White loss rates. The last four year groups studied, (1981 - 1984) have higher loss rates than White officers but are decreasing in magnitude. The loss rates for Black officers in milestone period 3 fluctuate from one year group to the next. Loss rates for Black officers are higher in the last three year groups studied (1977 - 1979) as compared to White officers. In milestone period 4, Blacks experience loss rates in only five of 11 year groups studied with four of the five year groups showing higher loss rates than those of White

officers. White officers during this period experience consistently small loss rates. The variability of Black rates is probably due to small population sizes. The small population sizes in milestone periods 5 and 6 preclude further analysis.

b. Black Promotion Rates

Black officers have lower average promotion rates as compared to White officers in milestone periods 1 through 4, albeit the difference in the rates is slight in periods 2 and 3. It appears that Blacks have much higher promotion rates than White officers in milestone period 5; however, both milestone periods 5 and 6 have small population sizes, resulting in tenuous results.

In milestone period 1, Blacks have lower promotion rates in every year group except YG 1986 as compared to White officers. In milestone period 2, promotion rates fluctuate between being higher or lower than those of White officers from one year group to the next. However, in the last four year groups studied (1981 - 1984), Blacks have substantially lower rates in three of the year groups (YG 1982 has a slightly higher rate). Promotion rates fluctuate from year group to year group again in milestone period 3, but the differences in rates are somewhat more pronounced. Starting with YG 1970, Blacks have lower rates than White officers in three of four year groups (the rates are even in YG 1971),

then have higher rates from YG 1974 to YG 1976 and end with lower rates in the last three year groups studied (1977 - 1979). YGs 1963, 1970, and 1971 registered zero promotion rates in milestone period 4. Of the remaining eight year groups studied, Black officers in five year groups have higher promotion rates than White officers and one year group shows even rates between the two groups of officers. Analysis was not conducted on milestone periods 5 and 6 because of small population sizes.

2. Hispanic Officers

a. Hispanic Loss Rates

Hispanic officers have substantially higher average loss rates in the first two years of service as compared to White officers. For the next six years of service, they have equal or lower rates with the exception of YOS 4. The rates become higher from YOS 9 to YOS 14 with the exception of YOS 13. Rates are lower from YOS 15 to YOS 21. Rates are then higher in YOS 22-25 except for YOS 23. Beyond YOS 23 the population size becomes too small to draw further conclusions.

Analyzing milestone average loss rates shows that Hispanic officers experience higher loss rates in all six periods, albeit the difference between Hispanic and White loss rates is slight in milestone periods 2 and 4. Analysis was not conducted on milestone periods 5 and 6 because of small population sizes.

In milestone period 1, Hispanics have higher loss rates in every year group studied except for YGs 1981, 1983, and 1985. In milestone period 2, Hispanics initially have higher loss rates as compared to White officers in the first three year groups studied (1973 - 1975) and then have lower or zero loss rates in the next three year groups (1976 - 1978). The rate is higher in YG 1979 but then becomes lower for the next four year groups (1980 - 1983) and ends with a substantially higher rate in the last year group studied (1984). In milestone period 3, the loss rates for Hispanic officers are higher than those of White officers in the first five year groups (1968 - 1972). Loss rates of zero for Hispanic officers are registered in the next three of four year groups (1973, 1974, 1976). Hispanic loss rates are higher in YGs 1975, 1977 and 1978, and end up noticeably lower in YG 1979. In milestone period 4, Hispanics have positive loss rates in four of the 11 year groups (1966, 1969, 1970, 1973) and all of those rates are higher than those of White officers. However, the population sizes are very small in each of the individual year groups, resulting in tenuous analysis. The same is true for milestone periods 5 and 6; therefore, analysis was not continued.

b. Hispanic Promotion Rates

Comparing Hispanic average promotion rates to those of White officers across the milestone periods shows that

Hispanics have lower average promotion rates in four of the five periods in which they have a population size. The exception is milestone period 3 where they have a slightly higher rate as compared to White officers. Milestone periods 5 and 6 could not be analyzed because of small or zero population sizes.

In milestone period 1, Hispanics have lower or even promotion rates compared to White officers in most of the year groups except for YGs 1979, 1983, 1986. In milestone period 2, Hispanic promotion rates fluctuate slightly among the various year groups. The biggest difference in rates is seen in YG 1979. The last two year groups studied (1983 and 1984) have lower promotion rates for Hispanic officers as compared to White officers. In milestone period 3, Hispanics appear to have higher loss rates in the last six of seven year groups studied (the exception is YG 1978). Prior to YG 1973, Hispanics have lower promotion rates in every year group studied. The population sizes become too small in the individual year groups to continue with the analysis in milestone periods 4 - 6.

3. Female Officers

a. Female Loss Rates

With the exception of YOS 3, compared to males, females experience lower average loss rates in the first seven years of service. They then have higher loss rates from YOS

8 to YOS 11. Loss rates are almost even at YOS 12, substantially higher at YOS 13 and YOS 15 and zero for YOSs 14, 16-18. The population size was very small in the latter three years of service and zero beyond YOS 20.

Comparing female average milestone loss rates against those of White officers in each of the milestone periods, female officers have lower average loss rates in milestone periods 1 and 2 and then have substantially higher loss rates in milestone periods 3 and 4. However, the population sizes in milestone periods 4 - 6 are quite small or even zero and so do not warrant further analysis. The lower loss rates in milestone period 1 and 2 may be influenced by the "transfer effect" since inventory levels actually increased in some of the late 1970's and early 1980's year groups because of an influx of females transferring into the community.

Zero loss rates for female officers were registered in YGs 1975, 1977 - 1980 and 1985 probably because of the "transfer effect" in milestone period 1. Loss rates were lower for females as compared to males in YGs 1981 - 1983 and become higher in YG 1984. In the last four year groups studied, the loss rates fluctuated, starting lower in YG 1986 and ending higher in YG 1989. In milestone period 2, there was a zero population size in YG 1974. Of the remaining 11 year groups studied, only four had higher loss rates for female officers as compared to male officers (1976, 1977,

1982, 1984, the last year group used in the computations). In milestone period 3, the population size was too small or zero in year groups prior to YG 1975, with the exception of YG 1973, to warrant analysis. Of the remaining six year groups, YG 1976 has a slightly higher loss rate for females as compared to males, and YGs 1977 and 1979 (the last year group studied) have substantially higher loss rates.

b. Female Promotion Rates

Of the four milestone periods in which females have a population size large enough for analysis, women show higher average promotion rates than men in three of the periods (1, 2 and 4). The exception is milestone period 3, in which females have lower average promotion rates than their male counterparts. Milestone periods 5 and 6 have zero population sizes.

In milestone period 1, female officers generally have higher promotion rates as compared to male officers in every year group except YG 1986 and YG 1989 (albeit the difference is slight except for the first four year groups). In milestone period 2, average female promotion rates are higher in every year group except for YGs 1976, 1983, and 1984 (the last two year groups used in the computations). YG 1974 has a zero population. The promotion rates for females fluctuate in the last five year groups studied in milestone period 3 and end with a lower rate in YG 1979. The population

size is too small in the earlier year groups to conduct the analysis. The same is true for all year groups in milestone periods 4 - 6.

4. Summary

In the Aviation community, Black officers experience higher loss rates and corresponding lower promotion rates compared to White officers in milestone periods 1, 2, 3 and 4. Hispanic officers, compared to White officers, have higher loss rates and lower promotion rates in milestone periods 1, 2 and 4, as well as, higher loss rates in milestone period 3. Female officers have higher loss rates and lower promotion rates in period 3, as well as, higher loss rates in period 4 compared to male officers.

E. ANALYSIS OF SUBMARINE WARFARE COMMUNITY

1. Background

Only five year groups in the submarine community have available inventory levels of Black officers of at least ten (YGs 1976, 1978, 1980, 1990 and 1991). Hispanic officers are represented even less with only three year groups that have an available inventory of at least ten (YGs 1983, 1989, and 1991). Because of the small population sizes for Blacks prior to YG 1976 and for Hispanics prior to YG 1983, analysis of loss and promotion rates was limited to the more recent year groups, which include only the first couple of milestone

periods and the first 14 or ten years of service for Blacks and Hispanics, respectively.

2. Black Officers

a. Black Loss Rates

Black officers have higher average loss rates than those of White officers in the first three years of service. In the next four years of service (YOSs 4 - 7), Blacks have lower loss rates except for YOS 6. Except for YOS 10, Blacks have higher loss rates compared to White officers from YOS 8 through YOS 14.

Comparing average milestone period loss rates with those of White officers shows that Blacks experience higher loss rates in milestone periods 1, 3 and 4. Blacks have a lower loss rate than White officers in milestone period 2. The loss rates in milestone periods 4 - 7 are tenuous because of small or zero population sizes.

In milestone period 1, Black officers have higher loss rates compared to White officers in 11 of 15 year groups included in the computations. The exceptions are YGs 1975, 1979, 1988 and 1989. In milestone period 2, Blacks have higher loss rates in YGs 1975 and 1976, then lower loss rates in the next three year groups (1977 - 1979). YGs 1980 and 1981 indicate higher loss rates for Blacks compared to Whites, while the last three year groups used in the computations reflect lower loss rates for Black officers. Analysis of loss

rates prior to YG 1975 could not be conducted because of small population sizes in both milestone period 2 and 3. In milestone period 3, Blacks have higher loss rates compared to White officers in the last four year groups studied (1976 - 1979).

b. Black Promotion Rates

Comparing average Black promotion rates against those of Whites in the various milestone periods shows that Blacks have slightly higher rates in milestone periods 1 and 2. Black officers have a substantially lower average promotion rate in milestone period 3 but then have a higher rate compared to White officers in milestone period 4. However, the population sizes in milestone periods 4 - 7 are too small or zero to continue further analysis.

Higher/lower promotion rates for Black officers as compared to White officers fluctuate among the various year groups in milestone period 1. Slightly higher loss rates are evident in the last two year groups included in the computations (1988, 1989). In milestone period 2, Black officers have higher promotion rates in eight of the 12 year groups studied. (YG 1974 had a zero population size.) The last three year groups in the study indicate higher promotion rates for Black officers as compared to White officers, and these rates show an increasing trend. Beyond milestone period

2, the population sizes of the year groups included in the computations are too small to continue analysis.

3. Hispanic Officers

a. Hispanic Loss Rates

Of the ten years of service that have a population size conducive for analysis, Hispanic officers have higher average loss rates in eight of the years of service categories as compared to White officers. Hispanics have lower loss rates in YOSs 7 and 10 only.

Hispanics have higher average loss rates in every milestone period in which they are represented (periods 1 - 5), however, the loss rates in milestone periods 3 - 7 are tenuous because of small or zero population sizes.

Within milestone period 1, only YGs 1981 and later could be used in the analysis, and these year groups showed that Hispanics have higher loss rates compared to White officers in each of these year groups except YGs 1983 and 1986. In fact, the loss rates show an increasing trend over the last three year groups used in the computations (1987 - 1989). In milestone period 2, of the last four year groups that supported analysis, three of the year groups (1981, 1983, 1984) show higher loss rates for Hispanic officers compared to White officers. The exception is YG 1982.

b. Hispanic Promotion Rates

Comparing average promotion rates between Hispanic and White officers in the various milestone periods shows that Hispanic officers have a slightly lower rate in milestone period 1 and a fairly comparable rate in milestone periods 2 and 3. Milestone period 4 indicates a higher average promotion rate for Hispanic officers as compared to White officers; however the population sizes for milestone period 4 - 7 are too small to draw conclusions.

In milestone period 1, Hispanics have comparable or lower promotion rates in every year group commencing with YG 1981 and subsequent year groups, except for YG 1986. The last three year groups used in the computations (1987 - 1989) have consistently lower promotion rates for Hispanics when compared to White officers. In milestone period 2, promotion rates for Hispanic officers alternate lower/higher commencing with YG 1981 through YG 1984. Year groups prior to 1981 do not have population sizes large enough to support further analysis. This is also true of all the year groups used in the computations in milestone periods 3 - 7.

4. Summary

In the Submarine community, Black officers have higher loss rates in milestone periods 1, 3 and 4 and lower promotion rates in milestone period 3 compared to White officers. Hispanic officers have higher loss rates and lower promotion

rates in milestone period 1, as well as higher loss rates in milestone period 2 compared to White officers. Unfortunately, ethnic representation in the Submarine community is small and analysis is limited to the more recent year groups and years of service categories.

CHAPTER VI. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The goal of this thesis was to conduct a cohort analysis to compare the career opportunities, in terms of loss and promotion rates, of ethnic (Black and Hispanic) and female officers with those of White ethnic and male officers, respectively. Data was compiled from the OPIS dataset to compute ethnic/gender loss and promotion rates for year groups 1960 - 1991 in the Surface, GenURL, Aviation and Submarine communities.

The study was hindered by a lack of data because of limited representation of Black, Hispanic and/or female officers in the communities and to nonavailability of data prior to FY 1975. Analysis of the older year groups and higher years of service categories often could not be conducted because of small or zero populations of the study groups. However, all rates, even those rates computed from small populations, are included in the appendices for reference.

An objective of this study was to determine whether uptrends or downtrends in loss or promotion rates could be observed from one year group to the next. Overall, it would

appear that rates fluctuated over some periods of time and observable trends occurred only infrequently.

Rates computed for each year of service averaged across year groups addressed the issue of loss and promotion rates from one year to the next. However, there was much variability in these rates and it was difficult to assess whether the group of officers studied were, in fact, experiencing higher or lower rates over time in relation to their comparison group of officers. Milestone periods defined in Chapter IV, section E, on the other hand, aggregated years of service to emphasize significant junctures in a community's career path. These junctures included significant events such as leadership tours, promotions, important sea/shore tours, etc., whose achievement highlighted the successful progression of officers. Thus, averaging rate data over such periods of time provided a more comprehensive analysis than point-to-point analysis of loss and promotion rates by year of service for all groups of officers included in the study.

Regarding milestone period loss and promotion rates in each of the communities, there is generally a direct correspondence between higher loss rates and lower promotion rates in the case of Black officers as compared to White officers. Primarily Black officers experienced higher loss rates in milestone periods 1, 3 and 4 in each of the four communities studied, with the exception of the GenURL community where Black officers experienced lower loss rates in

milestone period 1. This is generally accompanied by lower promotion rates in the same milestone periods, although Black officers in the Submarine community have higher promotion rates in milestone periods 1 and 4.

The correspondence between higher milestone loss rates and lower milestone promotion rates as compared to White officers applies to Hispanic officers, as well, in the Surface and Aviation communities. Generally, Hispanic officers experience higher loss rates and corresponding lower promotion rates compared to White officers in milestone periods 1, 3 and 5 in the Surface community and milestone periods 1, 2 and 4 in the Aviation community (although the differences in loss rates are slight in periods 2 and 4). In addition, Hispanics have lower promotion rates in milestone period 4 in the Surface community. In the Submarine community Hispanics have higher loss rates and corresponding lower promotion rates in milestone period 1 although they also have higher loss rates in subsequent milestone periods.

This correspondence between higher loss rates and lower promotion rates is not seen in the GenURL community; instead, Hispanic officers have slightly higher loss rates in milestone periods 1 and 3 and lower promotion rates in milestone periods 2 and 4 as compared to White officers.

It appears that female officers in the surface and aviation communities have higher loss rates and lower promotion rates in just one or two of the milestone periods as

compared to their male counterparts. However, the following points should be addressed when interpreting the results. First, women have not been around long enough to be present in the senior paygrades in sufficient numbers to warrant analysis beyond milestone period 3. Also, the first two milestone periods are comprised of year of service categories where lateral transfers into the community have an impact. Inventory levels actually increased from one year of service to the next in the first five years of service for several year groups after the communities were first opened to women. The effect of transfers into the communities must have influenced loss rates downward and promotion rates upward.

In the GenURL community, male officers have higher loss rates and lower promotion rates in almost every aspect studied--milestone periods, average years of service and year groups--as compared to their female counterparts. Prior to FY 1992, male GenURLs were primarily lateral transfers and attrites from other communities. Until December 1989, the policy was to automatically redesignate many attrites from other URL communities (for whatever reason) to 1100s. Since then, attrites have had to undergo a selection process to be accepted into the 1100 community. (General URL Community Bulletin, December 1992) Therefore, the automatic redesignation of male attrites, without benefit of selection to identify possible non-promotable candidates, may be a factor in causing these differences in rates. Other factors,

such as bias in promotion or an individual's decision to leave (self-selection), may also have an impact on the differences in rates.

B. RECOMMENDATIONS

The CNO Study Group on Equal Opportunity in the Navy investigated the status of equal opportunity for minorities in the Navy and published a thorough review of officer/enlisted accessions, attrition, and other personnel management policies and practices. This thesis focused on two aspects included in the CNO study: losses and promotional data for Black and Hispanic officers, as well as for female officers. This thesis examined loss and promotion rates in more detail and over a larger period of time than the CNO study and analyzed rates by year groups versus aggregates over fiscal years.

The results of both studies are comparable. In addition to the multitude of CNO study recommendations, the following recommendations are provided for further research.

- Investigate reasons why Black, Hispanic, and female officers leave the communities with emphasis on the problematic years of service and milestone periods that have higher loss rates compared to White and male officers identified in this study. Reasons for leaving may differ between milestone periods, and as such retention and mentor programs could be revised accordingly to increase the retention of these groups of officers.

- Investigate the reasons for differences in promotion rates identified in this study, again with emphasis on the problematic years of service and milestone periods.

- Study the reasons for the discrepancies between female and male loss/promotion rates in the GenURL community.

- Because data limitations restricted much of the analysis effort in this thesis, another study could be conducted in five or ten years, in which time more data would become available.

APPENDIX A - OPIS FILE VARIABLES AND CODES

Table VII. OPIS FILE VARIABLES AND CODES

File Variable	OPIS Code	Definition
TARIND	0	Active duty officers less TAR
RECTYPE	0 8	Inventory data Promotion data
GENDER	1 2	Male Female
ETHNIC	1 2 4	White Black Hispanic
PAYGRADE	5 6 7/8 9/10 11/12 13 14	ENS LTJG LT LCDR CDR CAPT flag
YOS	0 - 31	Years of Service
DESIG	1 2,3,8 4,5,9 13,38,55,56,57	110X 111X, 116X 112X, 117X 130X, 131X, 132X 137X, 139X

APPENDIX B - INVENTORIES

Table VIII. INVENTORY OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1125	1132	1133	969	1118	1199	1057	1218	937	839	1336	1185	1228	1102	878	759	796
2															1064	1315	1124	1177	980	1204	1209	1138	1259	1018	952	1411	1232	1349	1144	942	774	
3														1168	1057	1249	1126	1192	1030	1172	1234	1113	1261	1028	955	1407	1256	1311	1157	939		
4													1060	902	864	1102	1037	1101	968	1078	1090	993	1109	904	845	1270	1122	1217	1090			
5												724	833	679	690	843	808	921	799	828	745	704	816	683	659	909	811	860				
6											585	535	610	457	489	610	622	721	623	644	594	579	678	565	505	692	589					
7										506	454	421	468	363	373	471	461	580	501	527	498	477	572	471	408	558						
8									391	422	380	368	395	298	318	386	395	481	410	425	416	414	512	391	337							
9								467	338	370	326	322	355	279	292	357	359	433	350	379	375	368	450	343								
10							254	387	330	367	309	297	337	266	274	337	337	391	323	342	358	353	410									
11						275	278	327	286	323	274	267	332	258	248	277	302	352	296	315	335	328										
12					317	258	266	300	254	292	246	243	300	249	241	256	277	299	251	279	271											
13				300	309	248	251	272	238	286	238	231	295	238	230	249	264	285	236	258												
14			437	282	293	237	231	260	211	273	228	220	282	231	223	243	258	272	230													
15		357	428	277	286	240	223	245	203	258	219	215	272	225	220	237	245	261														
16	323	369	423	268	286	235	240	242	203	259	213	213	262	227	221	229	237															
17	336	367	416	265	284	233	238	246	201	254	204	214	253	218	217	219																
18	325	355	408	255	293	229	230	240	194	248	204	212	245	215	212																	
19	313	344	400	228	282	222	226	230	187	232	199	205	227	203																		
20	287	309	371	208	262	200	217	202	170	221	189	196	214																			
21	200	211	269	140	193	157	164	144	120	161	128	129																				
22	163	181	210	115	157	130	148	129	109	136	114																					
23	147	168	183	102	136	115	128	114	98	125																						
24	138	150	172	93	125	106	118	112	82																							
25	120	133	149	84	111	93	104	94																								
26	108	113	127	74	100	84	92																									
27	66	92	99	54	77	51																										
28	58	80	84	50	51																											
29	47	68	76	34																												
30	33	56	45																													
31	15	15																														

Table IX. INVENTORY OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																34	63	102	66	61	67	65	69	82	67	116	97	81	98	77	84	62
2															28	49	56	94	69	63	65	69	60	75	75	113	97	92	93	78	87	
3														34	29	49	51	92	69	63	64	66	62	71	69	111	96	88	91	78		
4													25	29	22	41	46	84	66	57	54	54	56	59	64	90	86	78	79			
5												13	29	19	15	35	42	68	54	35	41	32	39	49	55	69	58	60				
6											10	9	22	15	13	29	35	58	46	32	29	26	34	44	47	52	48					
7										9	10	7	17	12	10	25	30	46	36	27	30	22	28	39	38	44						
8									1	8	10	7	16	10	10	22	27	37	34	23	25	22	25	36	35							
9								1	1	7	7	6	15	10	8	20	24	34	28	20	19	20	20	29								
10							6		1	5	6	6	13	10	9	21	24	31	26	19	17	18	19									
11						2	6		1	4	6	4	13	6	9	16	19	27	24	19	15	18										
12					4	2	6		1	4	6	4	12	5	9	14	16	21	19	18	11											
13				3	3	2	6		1	4	6	4	10	4	9	14	15	21	19	17												
14			3	3	3	1	6		1	4	5	4	10	4	9	14	13	20	18													
15		1	3	2	4	1	5		1	4	5	4	10	4	9	14	13	21														
16	3	1	4	2	5	1	5		1	4	5	3	10	4	9	13	13															
17	3	1	4	2	5	1	5			4	6	3	10	5	9	12																
18	3	1	4	2	5	1	5			4	6	3	10	4	8																	
19	3		4	2	5	1	5			4	6	3	9	3																		
20	2		4	2	5	1	5			3	6	2	8																			
21	2		3	2	4	1	5			3	4	2																				
22	2		3	2	3	1	5			1	3																					
23	1		3	2	3	1	5			2																						
24	1		3	2	2		4																									
25	1		3	1	2		3																									
26	1		3	1	2		3																									
27	1		3	1	2																											
28	1		2		2																											
29	1		2																													
30	1		2																													
31	1																															

Table X. INVENTORY OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEARS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																2	4	10	3	3	22	17	19	43	51	63	53	47	47	62	43	59
2															4	5	3	13	4	3	20	24	20	44	54	58	56	51	50	65	45	
3														8	4	3	4	13	5	3	21	23	21	42	53	56	57	51	52	66		
4													3	6	4	3	4	13	4	4	16	22	20	31	49	54	49	42	42			
5												1	2	4	4	2	4	12	3	2	13	19	16	22	38	46	32	28				
6											2	1	2	4	3	2	4	10	3	2	10	13	12	17	31	31	22					
7										1	2	1	2	2	3	2	2	8	2	2	8	8	11	16	24	23						
8									3	1	1	1	1	2	2	2	1	8	2	2	6	7	10	15	22							
9								3	3	1	1	1	1	2	2	2	1	7	2	2	5	7	7	14								
10								2	3	1	1		1	2	2	2	1	7	1	2	5	6	7									
11							1	2	3	1			1	2	2	1	1	7		2	5	6										
12					2		1	2	3	1			1	2	2		1	5		1	3											
13				1	2		1	2	3	1			1	2	2		1	3		1												
14				1	2		1	2	3	1			1	1	2		1	3														
15				1	2		1	2	3	1			1	1	2		1	3														
16	2			1	2		1	1	3	1			1	1	2		1															
17	2			1	2		1	1	3	1			1	1	2																	
18	2			1	2		1	1	3	1			1	1	2																	
19	2			1	2		1		2	1			1	1																		
20	1			1	1		1		2	1			1																			
21	1			1			1		1																							
22				1			1		1																							
23				1			1		1																							
24				1			1		1																							
25				1			1																									
26				1			1																									
27				1																												
28				1																												
29																																
30																																

Table XI. INVENTORY OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1174	1211	1260	1058	1204	1303	1175	1318	1083	990	1557	1391	1381	1266	1048	935	932
2															1108	1382	1196	1299	1069	1278	1307	1263	1350	1163	1115	1627	1439	1523	1306	1123	955	
3														1223	1105	1313	1193	1309	1111	1243	1331	1226	1358	1167	1109	1619	1465	1479	1322	1125		
4													1102	947	901	1159	1097	1198	1037	1145	1169	1093	1196	1014	986	1453	1297	1357	1232			
5												742	874	708	717	889	857	989	853	864	803	769	876	764	776	1051	923	959				
6											603	549	641	478	511	646	660	776	668	676	633	628	727	638	602	793	679					
7										520	470	432	489	378	390	500	491	619	534	553	536	515	616	538	484	642						
8									394	434	394	378	415	311	330	412	422	511	446	451	448	453	550	452	404							
9								472	342	382	337	331	372	292	301	379	384	460	380	403	399	403	480	395								
10							261	390	334	377	319	306	352	279	284	361	362	418	350	364	380	385	439									
11						279	284	330	291	331	283	273	347	268	259	295	322	375	318	336	355	359										
12					324	262	273	302	259	300	255	249	314	257	254	271	294	316	267	297	283											
13				305	315	252	258	274	243	292	246	236	307	246	243	263	279	300	252	275												
14			440	287	299	240	238	262	217	281	237	224	294	238	236	256	272	286	245													
15		358	431	281	293	243	229	247	208	265	228	219	284	232	233	250	259	276														
16	329	370	427	272	294	239	247	243	208	266	221	216	274	234	234	241	251															
17	342	368	420	269	292	236	246	247	205	261	213	217	265	226	230	230																
18	331	356	412	260	303	231	237	241	198	255	213	215	257	222	224																	
19	319	344	404	232	292	224	233	230	190	239	208	208	237	209																		
20	291	309	375	212	271	202	223	202	173	227	198	198	223																			
21	204	211	272	144	199	158	170	144	122	166	134	131																				
22	166	181	213	119	162	131	155	129	111	138	119																					
23	149	168	186	106	140	116	135	114	101	128																						
24	140	150	175	97	127	106	124	112	84																							
25	122	133	152	87	113	93	109	94																								
26	109	113	130	77	102	84	96																									
27	67	92	102	57	79	51																										
28	59	80	86	52	53																											
29	48	68	78	35																												
30	34	56	47																													
31	16	16																														

Table XII. INVENTORY OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEARS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3	2			5	18	15	19	18	14	19	19	15	29	41	39	37
2																0	0		5	20	17	16	19	17	18	18	21	17	30	42	40	
3																0	1	5	14	23	19	20	17	17	18	17	22	18	29	39		
4													1			0	4	16	19	20	18	20	16	17	17	17	23	18	27			
5												1	1			1	7	23	19	21	13	17	14	15	11	13	19	15				
6												1	1		1	2	8	21	16	18	11	16	12	11	7	11	15					
7													1	1	2	5	6	21	14	17	7	14	10	7	4	8						
8									1				1	1	5	5	4	18	8	13	6	10	9	5	3							
9													1	1	5	5	4	16	5	11	6	9	7	5								
10													1	1	5	3	2	13	4	8	5	8	7									
11							1				1		1	1	4	2	2	13	6	8	5	8										
12											1		1	1	2	2	2	11	6	9	6											
13										2	2		1		2	2	1	11	6	9												
14													1		2	2	1	11	6													
15													1		2	2	1	11														
16													1		2																	
17													1		2																	
18													1																			
19													1																			
20							1						1																			
21							1																									
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																
31																																

Table XIII. INVENTORY OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																332	198	304	305	343	458	309	339	334	228	230	183	169	161	167	174	136
2															391	275	161	314	317	357	471	305	325	300	225	228	195	186	172	164	180	
3														608	247	266	165	304	303	390	454	292	328	287	229	224	198	183	164	169		
4													299	288	236	285	160	282	303	367	440	282	355	298	232	238	219	170	159			
5												215	117	198	175	223	106	240	240	319	395	252	288	245	205	194	175	130				
6											115	112	77	130	115	140	64	196	194	271	318	217	219	174	138	134	114					
7										63	80	63	61	114	98	125	58	168	162	227	266	188	188	155	123	112						
8									43	49	66	44	53	107	98	117	50	146	153	200	228	180	174	131	119							
9								36	33	45	62	47	51	110	91	116	49	137	141	180	215	168	154	122								
10							25	22	28	45	56	42	49	101	87	112	47	133	131	159	207	160	145									
11						26	20	27	23	47	55	41	46	92	84	87	36	109	121	143	195	147										
12					17	23	13	26	24	43	59	38	45	88	78	83	35	93	92	117	137											
13				19	16	25	13	26	24	33	54	35	43	87	78	81	34	88	88	96												
14			11	15	12	22	14	21	27	32	53	35	43	82	75	77	32	88	83													
15		16	8	12	12	20	12	23	27	33	52	33	44	82	71	74	31	88														
16	15	14	9	12	16	26	11	26	22	34	50	31	42	84	72	72	29															
17	13	14	8	12	19	24	14	26	19	35	51	29	41	81	72	71																
18	12	11	10	11	26	27	15	27	19	34	50	25	41	82	71																	
19	12	11	12	11	22	25	11	24	18	32	49	25	41	80																		
20	12	12	12	10	18	20	8	22	19	30	45	24	32																			
21	6	6	11	7	15	14	5	17	13	14	27	15																				
22	7	8	9	7	8	10	5	12	10	8	21																					
23	6	9	5	5	7	10	4	12	10	9																						
24	3	8	6	5	5	12	3	12	8																							
25	1	8	5	5	5	7	2	10																								
26		7	5	5	4	8	2																									
27		4	4	4	3	3																										
28		4	4	3	2																											
29		2	3	3																												
30		2																														
31																																

Table XIV. INVENTORY OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																11	5	25	17	13	17	34	29	30	35	42	21	8	10	20	28	28
2															13	12	7	33	22	16	20	33	32	32	32	41	23	14	12	20	28	
3														33	10	12	11	33	22	22	21	34	31	32	35	42	22	15	13	20		
4													15	12	10	13	11	33	21	18	21	34	28	33	30	45	23	15	13			
5												4	2	11	9	10	8	29	18	16	20	34	28	24	29	36	18	12				
6											2	5	3	8	8	10	7	23	21	16	19	29	25	22	25	28	15					
7											1	4	2	8	7	9	6	23	18	12	19	27	23	20	24	28						
8											1	4	3	8	6	7	7	21	18	10	17	25	22	18	23							
9								1			1	2	3	9	5	6	8	20	16	7	16	22	19	19								
10							1	1		1	1	2	3	9	5	7	7	18	14	7	15	22	17									
11						1	1	1			1	2	3	8	5	6	4	17	11	7	14	22										
12						1	1	1			1	3	3	7	5	6	3	14	5	5	9											
13						1	1	1			1	2	4	6	5	6	3	14	5	4												
14						1	1	1	1		1	2	4	6	4	6	4	13	5													
15						1	1	1	1		1	2	3	5	4	6	3	12														
16						1	1	1	1		1	2	4	5	4	6	3															
17							1	1			1	2	2	5	4	6																
18					1		1	1			1	2	2	5	4																	
19					1		1	1			1	2	2	5																		
20					1		1	1			1	2	2																			
21					1		1	1			1	1																				
22					1		1				1																					
23					1		1																									
24					1		1																									
25					1		1																									
26																																
27																																
28																																
29																																
30																																
31																																

Table XV. INVENTORY OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3	2	2	2	2	4	7	8	6	3	12	10	2		10	3	9
2															3	4	2	5	2	4	5	7	9	7	5	15	10	4		10	3	
3														5	2	4	2	4	1	3	4	6	9	7	5	14	10	4		9		
4													2	1	1	4	2	3	1	2	4	5	8	7	6	13	11	4				
5													1	1	1	3	1	2	1		4	3	7	7	6	12	8	4				
6												1	2	1	1	3	2	2	1		3	3	7	5	3	12	8					
7													1	1	1	1		2	1		3	3	6	4	2	12						
8													1	1	1	1		2	1		2	3	5	2	2							
9														1	1	1		2	1		2	2	4	1								
10														1	1	1		2	1		2	2	4									
11														1	1	1		2			2	1										
12														1	1			2			1											
13														1	1			1														
14														1	1			1														
15														1	1			1														
16														1	1																	
17	1													1	1																	
18	1													1	1																	
19	1					1								1																		
20	1																															
21	1																															
22		1																														
23		1																														
24		1																														
25																																
26																																
27																																
28																																
29																																
30																																
31																																

Table XVI. INVENTORY OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																142	91	59	45	51	88	36	50	84	54	57	44	65	44	62	47	43
2															221	90	81	92	74	89	101	38	45	63	59	63	57	69	56	52	49	
3														404	83	89	92	93	82	133	98	42	59	63	70	71	63	75	51	58		
4													234	116	100	124	93	100	103	122	102	51	105	87	89	101	94	69	47			
5												152	75	55	65	87	54	90	84	106	100	53	77	77	78	68	68	49				
6											40	22	17	15	19	24	22	56	64	72	60	37	30	24	14	20	28					
7										19	14	9	7	10	13	20	16	42	43	45	40	27	19	17	12	17						
8									21	8	7	3	5	9	14	19	15	32	39	36	30	25	15	9	11							
9								12	12	4	5	7	9	10	11	18	18	29	31	24	30	22	12	10								
10							9	3	7	6	3	7	8	9	7	20	16	26	28	23	29	23	11									
11						7	1	4	3	8	4	8	7	3	3	5	5	8	20	19	27	22										
12					4	4	1	4	5	8	9	7	6	3	1	5	3	3		6	10											
13				7	3	5	2	5	5	3	6	5	5	4	3	5	3	2		3												
14			5	5	1	6	5	5	10	2	6	6	6	4	4	5	4	3														
15		4	3	3	1	8	4	8	12	3	6	4	6	4	3	5	3	3														
16	5	1	5	3	5	14	4	11	6	2	6	4	6	4	3	5	3															
17	1	1	2	3	8	18	6	11	3	3	5	1	2	3	3	5																
18	1		4	4	11	19	8	11	3	2	5	1	2	3	2																	
19	1		6	5	10	19	5	9	3	1	5	1	2	3																		
20	2	1	4	4	8	13	5	9	4	1	4	1	2																			
21	2		5	2	6	8	4	7	4	1	3																					
22	3	3	6	2	2	5	3	5	4		1																					
23	2	3	3	1	1	5	2	5	3																							
24	1	2	3	1		6	2	4	2																							
25	1	1	2	1		2	1	3																								
26		1	2	1		3	1																									
27		1	2	1		2																										
28		1	2	1																												
29			1	1																												
30																																
31																																

Table XVII. INVENTORY OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																206	119	276	283	311	402	323	333	295	216	230	179	120	134	143	166	144
2															191	204	92	265	273	292	405	317	330	283	210	226	181	143	137	151	169	
3														257	181	195	90	252	250	287	389	302	319	271	205	215	177	135	134	149		
4													91	189	153	180	83	223	231	270	373	282	298	260	187	201	173	127	130			
5												71	46	157	125	150	63	185	184	236	329	246	258	210	173	177	145	103				
6											78	97	65	126	108	130	53	167	158	221	289	219	228	185	156	155	115					
7										44	67	59	57	115	95	116	50	153	143	198	255	196	204	170	140	136						
8									24	41	60	46	52	109	93	107	44	139	137	178	224	188	191	149	136							
9								25	23	42	58	43	45	112	88	106	42	131	132	167	210	174	170	138								
10							17	20	23	40	54	38	44	104	88	101	41	128	122	147	202	165	159									
11						20	20	24	22	40	52	35	42	99	88	90	37	121	117	134	191	152										
12					13	20	13	22	20	36	52	34	42	94	84	84	37	106	99	117	143											
13				12	13	21	12	22	19	31	50	32	42	91	82	82	36	101	96	98												
14			6	10	11	17	11	17	18	31	49	31	41	86	77	78	34	99	91													
15		12	5	9	11	13	9	16	17	31	48	31	41	85	74	75	33	98														
16	10	13	4	9	11	13	8	17	17	33	47	29	40	87	75	73	31															
17	13	13	6	9	11	8	10	17	16	33	49	30	41	85	75	72																
18	12	11	6	8	16	9	9	17	16	32	47	26	41	86	75																	
19	12	11	6	7	15	7	8	16	15	31	46	26	41	84																		
20	11	11	8	6	13	7	5	14	15	29	43	25	32																			
21	5	6	6	5	10	6	3	11	9	14	25	16																				
22	4	6	3	5	7	5	4	7	6	8	21																					
23	4	7	3	4	7	5	3	8	7	8																						
24	2	7	3	4	6	6	2	9	7																							
25		7	3	4	6	5	2	7																								
26		6	3	4	4	5	1																									
27		3	2	3	3	1																										
28		3	2	2	2																											
29		2	2	2																												
30		2																														
31																																

Table XVIII. INVENTORY OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1585	1622	1575	1224	1322	1292	1862	1623	1475	1181	1778	1947	1678	1262	1515	1393	1067
2															1483	1294	1165	1347	1168	1238	1180	1683	1458	1367	1101	1674	1780	1573	1218	1482	1293	
3														1337	1433	1259	1104	1314	1114	1208	1126	1597	1347	1249	1065	1603	1680	1551	1181	1363		
4													1621	1290	1410	1242	1107	1305	1105	1205	1099	1541	1339	1241	1049	1577	1673	1526	1153			
5												1393	1451	1197	1347	1183	1074	1296	1106	1199	1074	1493	1334	1214	1031	1569	1651	1461				
6											1376	1158	1198	1035	1183	1037	1030	1256	1081	1142	1045	1460	1294	1187	1012	1508	1555					
7										1217	1150	910	896	751	979	877	906	1133	985	984	927	1252	1151	1109	936	1352						
8									814	1016	913	671	636	604	827	766	807	972	734	761	741	969	898	896	774							
9								921	730	872	722	524	561	582	773	697	685	788	599	621	627	776	665	686								
10							522	786	687	788	662	491	523	556	744	671	629	696	541	572	562	706	578									
11						438	492	601	577	659	594	450	540	535	684	554	574	623	508	534	546	676										
12					467	420	466	529	510	607	562	426	500	519	660	500	511	512	429	449	431											
13				309	452	405	453	508	479	604	543	401	483	504	614	470	466	485	392	423												
14			333	302	438	387	446	488	458	602	530	386	462	488	581	460	456	452	373													
15		250	321	287	424	386	433	479	444	593	525	377	446	471	564	452	426	440														
16	328	254	318	273	414	374	448	468	446	597	514	376	419	468	555	424	404															
17	340	251	308	263	395	355	436	476	435	593	505	369	403	449	531	410																
18	331	236	295	256	389	340	415	467	430	566	482	351	393	456	517																	
19	312	222	280	226	374	322	399	457	404	536	455	340	371	425																		
20	264	203	254	201	328	280	347	389	362	475	398	286	332																			
21	189	163	205	151	228	195	228	288	234	327	259	200																				
22	163	139	170	136	185	145	190	241	197	267	219																					
23	145	125	151	113	155	134	167	217	173	227																						
24	132	112	137	105	137	128	158	211	143																							
25	110	99	113	98	119	119	142	171																								
26	100	82	97	85	104	102	117																									
27	68	69	68	67	78	53																										
28	56	56	56	62	45																											
29	46	45	44	33																												
30	31	36	22																													
31	13	22																														

Table XIX. INVENTORY OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																40	39	35	29	28	30	48	35	29	47	34	46	47	48	48	80	45
2															24	20	22	27	23	22	26	42	31	30	39	29	35	34	46	48	64	
3														47	18	16	22	27	20	16	23	38	28	24	34	20	32	33	45	39		
4													11	44	18	16	22	25	17	18	21	36	27	24	34	18	32	33	39			
5												6	11	43	18	16	22	24	20	19	22	32	26	23	31	18	29	32				
6											6	6	10	36	16	14	21	23	18	16	22	31	24	22	29	18	27					
7										2	4	5	6	26	12	12	19	23	16	17	21	26	20	22	25	19						
8									2	1	3	5	4	20	9	12	17	16	14	16	20	20	16	15	23							
9								5	2	1	3	5	4	19	9	12	16	13	11	14	16	14	12	10								
10							2	5	1	1	3	4	3	16	10	11	15	11	11	12	15	13	11									
11						5	2	5	1	1	1	4	5	14	10	10	12	7	9	11	15	11										
12					2	5	2	5	1	1	1	4	4	13	9	10	10	7	7	9	11											
13				1	2	5	2	5	1	1	1	4	3	13	8	10	10	7	7	7												
14				1	2	4	1	5	1	1	1	4	3	12	7	10	10	7	7													
15		1		1	2	4	1	5	1	1	1	3	3	11	6	10	10	7														
16		1		1	2	4	1	5	1	1	1	3	3	10	7	9	10															
17		1		1	2	4	1	5	1	1	1	3	3	8	6	8																
18		1		1	3	4	1	5	1	1	1	3	3	9	6																	
19		1		1	3	4	1	5		1	1	3	3	8																		
20		1		1	3	3	1	5		1	1	2	3																			
21		1			2	2	1	2		1																						
22		1			2	1	1	2		1																						
23		1			2		1	2		1																						
24		1			2		1	2																								
25		1			2		1	1																								
26		1			2		1																									
27		1			1																											
28		1																														
29		1																														
30		1																														
31		1																														

Table XX. INVENTORY OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																10	7	17	3	6	12	28	19	41	37	35	63	62	50	77	59	43
2															6	4	3	9	2	5	11	27	14	47	33	36	53	53	48	73	53	
3														7	7	4	1	9	1	6	10	24	10	42	30	33	48	52	45	57		
4													6	7	7	4	1	9	1	5	10	23	11	42	27	33	48	52	46			
5												6	6	6	7	4	1	8	1	4	10	24	11	40	27	32	47	48				
6											5	4	5	5	7	3	1	7	1	4	10	22	11	38	27	31	43					
7										4	3	3	5	5	7	2	2	7	1	4	10	18	10	35	22	29						
8									2	4	3	2	4	3	3	2	2	7	1	4	8	17	8	29	15							
9								4	2	4	3	2	3	3	3	2	2	4	1	4	7	16	6	23								
10							3	4	2	3	1	1	2	3	3	2	2	4	1	4	7	15	5									
11						2	3	4	1	2	1	1	1	3	3	2	2	3	2	4	7	13										
12					1	2	3	4		2	1	1	1	3	3	2	2	3	1	3	5											
13				4	1	2	3	3		1	1	1	1	3	3	1	2	3	1	3												
14				4	1	2	3	3		1	1	1	1	3	3	1	2	3	1													
15		1		4	1	2	2	3			1	1	1	3	3	1	2	3														
16		1		4	1	2	2	3	1		1	1	1	3	4	1	2															
17		1		4	1	2	2	3	1			1	1	2	4	1																
18		1	1	4	1	2	2	3	1			1	1	2	4																	
19		1		4	1	2	2	3	1			1	1	2																		
20		1		4	1	1	2	2	1			1	1																			
21		1		3	1	1	1	1	1			1																				
22		1		2	1	1	1	1	1																							
23		1		1	1	1	1	1	1																							
24		1		1	1	1	1	1	1																							
25		1			1	1		1																								
26		1			1																											
27					1																											
28																																
29																																
30																																
31																																

Table XXI. INVENTORY OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1659	1677	1632	1257	1357	1333	1946	1679	1563	1263	1846	2061	1790	1340	1647	1516	1149
2															1527	1324	1191	1380	1193	1264	1213	1757	1503	1457	1176	1727	1866	1670	1289	1602	1398	
3														1396	1470	1284	1129	1346	1132	1222	1152	1662	1382	1319	1131	1639	1756	1635	1251	1463		
4													1649	1345	1448	1267	1132	1335	1116	1221	1122	1603	1374	1312	1112	1611	1747	1612	1215			
5												1411	1477	1248	1384	1206	1100	1323	1116	1215	1098	1551	1368	1282	1091	1601	1722	1542				
6											1393	1174	1222	1077	1216	1056	1053	1283	1087	1155	1069	1515	1326	1252	1070	1542	1619					
7										1228	1162	921	914	781	1006	894	929	1162	991	1001	952	1295	1178	1170	987	1387						
8									822	1025	922	682	646	627	847	783	828	995	739	779	764	1010	921	941	814							
9								936	737	881	730	535	572	605	793	712	705	806	604	640	643	806	686	718								
10							532	799	693	796	668	500	531	574	766	685	647	712	547	589	578	732	599									
11						447	503	614	583	666	598	458	550	549	705	568	589	632	515	551	563	699										
12					473	428	477	541	513	614	567	434	508	532	679	513	524	523	431	463	439											
13				322	458	413	464	519	482	610	547	409	490	517	632	482	479	496	394	434												
14			335	315	444	394	457	499	461	608	534	394	469	502	598	472	469	463	377													
15		253	322	300	430	393	443	490	447	598	528	384	453	484	580	464	439	451														
16	329	258	319	286	420	382	460	479	449	602	518	383	425	480	573	436	417															
17	342	255	310	277	401	364	448	486	438	597	509	376	409	458	548	419																
18	333	240	296	270	397	349	425	476	433	570	484	358	399	465	534																	
19	314	226	280	239	382	330	409	466	406	540	457	347	376	433																		
20	265	207	254	214	336	286	356	398	364	479	399	292	337																			
21	189	167	205	160	231	200	234	291	236	330	259	201																				
22	163	143	170	143	188	149	196	246	199	269	219																					
23	145	129	151	119	158	137	173	222	175	228																						
24	132	116	137	111	140	130	163	216	145																							
25	110	104	113	102	122	121	145	175																								
26	100	86	97	88	107	103	119																									
27	68	71	68	69	80	54																										
28	56	58	56	64	45																											
29	46	47	44	34																												
30	31	38	22																													
31	14	24																														

Table XXII. INVENTORY OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3		4	6	10	15	18	29	17	27	34	39	40	38	52	57	59
2																4	4	9	6	12	16	17	27	16	22	40	40	33	39	54	51	
3														7		5	3	9	10	17	19	17	25	18	23	45	38	38	37	46		
4														7		5	4	9	13	19	19	17	24	18	21	45	38	34	40			
5												1		7		5	4	10	17	19	19	17	24	17	21	46	37	33				
6											1	1		8		5	4	8	19	18	19	17	24	17	20	44	34					
7											1	1		7		3	3	6	17	15	16	17	22	17	16	40						
8											1			6		3	2	5	15	13	14	14	16	15	12							
9											1			5		3	2	4	14	9	11	13	10	12								
10											1			5		3	2	3	12	8	10	13	7									
11											1			5		2	2	3	10	6	9	12										
12														5		2	1	1	9	4	10											
13														5		2	1	1	8	4												
14														3		2	1	1	6													
15														3		2	1	1														
16														3		1	1															
17														3		1																
18														4																		
19														4																		
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																
31																																

Table XXIII. INVENTORY OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																383	521	454	467	466	456	480	516	663	575	639	501	433	472	446	491	477
2															267	383	411	449	449	434	489	448	487	634	542	606	493	477	453	410	443	
3														341	308	376	393	428	432	458	457	440	461	615	529	561	460	459	444	394		
4													315	340	305	354	383	414	420	442	447	437	440	589	504	544	438	451	435			
5												296	273	316	288	306	318	368	360	406	378	348	364	480	411	437	409	429				
6											209	209	195	238	205	208	223	276	265	302	272	265	286	388	307	317	253					
7										195	150	181	155	189	166	181	204	255	241	275	233	229	260	358	288	288						
8									161	160	135	160	134	143	132	155	175	221	208	228	190	184	194	293	213							
9								133	138	147	120	140	118	131	120	149	160	197	181	205	158	162	145	238								
10							100	116	132	143	115	133	115	117	118	151	163	177	163	195	152	162	136									
11						58	90	106	120	126	102	115	110	108	113	122	152	159	145	185	138	152										
12					93	53	77	94	102	106	87	104	94	100	113	110	138	136	120	166	120											
13				95	86	52	72	91	84	98	79	93	89	92	102	100	128	123	110	151												
14			108	89	81	51	66	77	76	85	78	84	82	87	95	91	124	108	103													
15		87	97	81	78	48	60	67	74	77	73	81	78	80	91	89	121	102														
16	106	88	100	80	77	47	66	61	71	77	66	70	73	78	89	85	119															
17	103	87	101	79	75	49	66	64	71	74	69	70	71	74	88	81																
18	99	82	99	77	74	48	65	63	68	70	67	68	69	75	87																	
19	98	77	96	75	72	48	64	62	67	63	67	67	65	71																		
20	90	73	93	72	72	46	58	57	65	59	60	66	57																			
21	71	59	64	62	56	41	52	51	53	51	53	59																				
22	66	52	59	54	49	38	46	45	49	45	51																					
23	62	51	54	51	47	36	39	42	46	44																						
24	64	46	52	48	44	35	37	42	45																							
25	55	44	47	44	38	35	34	40																								
26	51	39	42	42	34	30	27																									
27	38	34	35	40	28	19																										
28	30	33	32	32	19																											
29	26	28	29	21																												
30	17	24	19																													
31	7	10																														

Table XXIV. INVENTORY OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOE	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																4	10	5	13	3	9	3	7	6	3	3	4	7	3	4	10	14
2																4	9	4	12	3	11	4	6	5	2	2	2	5	3	4	7	
3														1		4	9	4	11	5	10	3	6	4	2	2	2	5	3	4		
4													1	1		3	8	4	10	5	11	3	6	3	2	2	3	5	3			
5												1		1		3	7	5	9	5	8	2	5	3	2	2	3	5				
6											1	1		1		3	5	3	8	3	7	2	4	3	1	2	1					
7										1	1			1		2	4	3	8	3	6	2	3	3	1	1						
8									1	1	1			1		1	4	3	8	3	4	1	3	3	1							
9									1	1				1		1	4	3	7	2	4		2	2								
10							1		1	2				1		1	4	1	6	1	4		2									
11							1		1	2				1		1	3	1	5	1	4											
12							1			2				1		1			3		4											
13							1			1				1		1			3													
14							1							1		1			2													
15							1									1																
16							1			1						1																
17							1			1						1																
18							1			1																						
19							1			1																						
20							1			1																						
21							1			1																						
22							1			1																						
23							1			1																						
24							1																									
25							1																									
26							1																									
27																																
28																																
29																																
30																																
31																																

Table XXV. INVENTORY OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1	2	1		2		8	6	11	9	6	4	5	9	12	9	15
2																	2	1			2	3	5	10	5	7	8	5	8	9	8	
3														2			2	1			2	4	5	10	5	6	8	4	7	8		
4													1	2			2	1			2	4	5	7	4	5	8	4	6			
5												2	1	2			1				2	3	5	4	4	3	7	3				
6												2	1	2			1				2	1	4	2	2	3	3					
7										1		2		1			1				1	1	4	2	1	3						
8									1	1		2		1			1						4	2	1							
9								1		1		1		1			1						2	1								
10										1		1		1			1						1									
11							1			1		2		1			1															
12							1			1		2		1			1															
13							1			1		2					1															
14							1			1		2					1															
15							1			1		2					1															
16							1			1		2					1															
17							1			1		1																				
18							1			1		1																				
19							1			1		1																				
20							1					1																				
21							1					1																				
22							1																									
23							1																									
24							1																									
25							1																									
26		1					1																									
27		1																														
28		1																														
29		1																														
30		1																														
31		1																														

APPENDIX C - LOSS DATA

Table XXVI. LOSS DATA OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2															7	66	0	0	0	32	0	25	0	0	0	4	0	38	0	3		
3														266	193	147	89	91	62	94	144	120	152	124	110	137	134	94	67			
4													227	223	174	259	229	180	169	250	345	289	293	221	186	361	311	357				
5												189	223	222	201	233	186	200	176	184	151	125	138	118	154	217	222					
6											131	114	142	94	116	139	161	141	122	117	96	102	106	94	97	134						
7										84	74	53	73	65	55	85	66	99	91	102	82	63	60	80	71							
8									53	52	54	46	40	19	26	29	36	48	60	46	41	46	62	48								
9								80	8	3	17	25	18	13	18	20	22	42	27	37	17	15	40									
10							0	60	44	44	35	30	5	8	26	60	35	39	27	27	23	25										
11						17	12	27	32	31	28	24	32	9	7	21	25	53	45	36	64											
12					8	10	15	28	16	6	8	12	5	11	11	7	13	14	15	21												
13				18	16	11	20	12	27	13	10	11	13	7	7	6	6	13	6													
14			9	5	7	0	8	15	8	15	9	5	10	6	3	6	13	11														
15		0	5	9	0	5	0	3	0	0	6	2	10	0	0	8	8															
16	0	2	7	3	2	2	2	0	2	5	9	0	9	9	4	10																
17	11	12	8	10	0	4	8	6	7	6	0	2	8	3	5																	
18	12	11	8	27	11	7	4	10	7	16	5	7	18	12																		
19	26	35	29	20	20	22	9	28	17	11	10	9	13																			
20	87	98	102	68	69	43	53	58	50	60	61	67																				
21	37	30	59	25	36	27	16	15	11	25	14																					
22	16	13	27	13	21	15	20	15	11	11																						
23	9	18	11	9	11	9	10	2	16																							
24	18	17	23	9	14	13	14	18																								
25	12	20	22	10	11	9	12																									
26	42	21	28	20	23	33																										
27	8	12	15	4	26																											
28	11	12	8	16																												
29	14	12	31																													
30	18	41																														

Table XXVII. LOSS DATA OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0	7	8	0	0	2	0	9	7	0	3	0	0	5	0	0	
2															0	0	5	2	0	0	1	3	0	4	6	2	1	4	2	0		
3														5	7	8	5	8	3	6	10	12	6	12	5	21	10	10	12			
4													0	10	7	6	4	16	12	22	13	22	17	10	9	21	28	18				
5												4	7	4	2	6	7	10	8	3	12	6	5	5	8	17	10					
6											0	2	5	3	3	4	5	12	10	5	0	4	6	5	9	8						
7										1	0	0	1	2	0	3	3	9	2	4	5	0	3	3	3							
8									0	1	3	1	1	0	2	2	3	3	6	3	6	2	5	7								
9								1	0	2	1	0	2	0	0	0	0	3	2	1	2	2	1									
10							0		0	1	0	2	0	4	0	5	5	4	2	0	2	0										
11						0	0		0	0	0	0	1	1	0	2	3	6	5	1	4											
12					1	0	0		0	0	0	0	2	1	0	0	1	0	0	1												
13				0	0	1	0		0	0	1	0	0	0	0	0	2	1	1													
14			0	1	0	0	1		0	0	0	0	0	0	0	0	0	0														
15		0	0	0	0	0	0		0	0	0	1	0	0	0	1	0															
16	0	0	0	0	0	0	0		1	0	0	0	0	0	0	1																
17	0	0	0	0	0	0	0			0	0	0	0	1	1																	
18	0	1	0	0	0	0	0			0	0	0	1	1																		
19	1		0	0	0	0	0			1	0	1	1																			
20	0		1	0	1	0	0			0	2	0																				
21	0		0	0	1	0	0			2	1																					
22	1		0	0	0	0	0			0																						
23	0		0	0	1	1	1																									
24	0		0	1	0		1																									
25	0		0	0	0		0																									
26	0		0	0	0																											
27	0		1	1	0																											
28	0		0																													
29	0		0																													
30	0																															

Table XXVIII. LOSS DATA OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0	1	0	0	0	2	0	0	0	0	5	0	0	0	0	0	
2															0	2	0	0	0	0	0	1	0	2	1	2	0	0	0	0		
3														2	0	0	0	0	1	0	5	1	1	11	4	2	8	9	10			
4													1	2	0	1	0	1	1	2	3	3	4	9	11	8	17	14				
5												0	0	0	1	0	0	2	0	0	3	6	4	5	7	15	10					
6											0	0	0	2	0	0	2	2	1	0	2	5	1	1	7	8						
7										0	1	0	1	0	1	0	1	0	0	0	2	1	1	1	2							
8									0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	1								
9								1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0									
10								0	0	0	1		0	0	0	1	0	0	1	0	0	0										
11							0	0	0	0			0	0	0	1	0	2		1	2											
12					0		0	0	0	0			0	0	0		0	2		0												
13				0	0		0	0	0	0			0	1	0		0	0														
14				0	0		0	0	0	0			0	0	0		0	0														
15				0	0		0	1	0	0			0	0	0		0															
16	0			0	0		0	0	0	0			0	0	0																	
17	0			0	0		0	0	0	0			0	0	0																	
18	0			0	0		0	1	1	0			0	0																		
19	1			0	1		0		0	0			0																			
20	0			0	1		0		1	1																						
21	1			0			0		0																							
22				0			0		0																							
23				0			0		0																							
24				0			0																									
25				0			0																									
26				0																												
27				0																												
28				1																												
29																																
30																																

Table XXIX. LOSS DATA OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2															3	69	3	0	0	35	0	37	0	0	6	8	0	44	0	0		
3														276	204	154	96	111	74	98	162	133	162	153	123	166	168	122	90			
4													228	239	184	270	240	209	184	281	366	324	320	250	210	402	374	398				
5												193	233	230	206	243	197	213	185	188	170	141	149	126	174	258	244					
6											133	117	152	100	121	146	169	157	134	123	97	113	111	100	118	151						
7										86	76	54	74	67	60	88	69	108	88	102	88	62	66	86	80							
8									52	52	57	47	43	19	29	33	38	51	66	48	49	50	70	57								
9								82	8	5	18	25	20	13	17	18	22	42	30	39	19	18	41									
10							0	60	43	46	36	33	5	11	25	66	40	43	32	28	25	26										
11						17	11	28	32	31	28	24	33	11	5	24	28	59	51	39	72											
12					9	10	15	28	16	8	9	13	7	11	11	8	15	16	15	22												
13				18	16	12	20	12	26	11	9	12	13	8	7	7	7	14	7													
14			9	6	6	0	9	15	9	16	9	5	10	6	3	6	13	10														
15		0	4	9	0	4	0	4	0	0	7	3	10	0	0	9	8															
16	0	2	7	3	2	3	1	0	3	5	8	0	9	8	4	11																
17	11	12	8	9	0	5	9	6	7	6	0	2	8	4	6																	
18	12	12	8	28	11	7	4	11	8	16	5	7	20	13																		
19	28	35	29	20	21	22	10	28	17	12	10	10	14																			
20	87	98	103	68	72	44	53	58	51	61	64	67																				
21	38	30	59	25	37	27	15	15	11	28	15																					
22	17	13	27	13	22	15	20	15	10	10																						
23	9	18	11	9	13	10	11	2	17																							
24	18	17	23	10	14	13	15	18																								
25	13	20	22	10	11	9	13																									
26	42	21	28	20	23	33																										
27	8	12	16	5	26																											
28	11	12	8	17																												
29	14	12	31																													
30	18	40																														

Table XXX. LOSS DATA OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3	2			0	1	0	0	1	0	1	0	0	0	0	0	
2																0	0		0	0	0	0	2	0	0	1	0	0	1	3		
3																0	0	0	0	3	1	0	1	0	1	0	0	0	2			
4													0			0	0	0	0	0	5	3	2	2	6	4	4	3				
5													0			0	0	2	3	3	2	1	2	4	4	2	4					
6												1	0		0	0	2	0	2	1	4	2	2	4	3	3						
7													0	0	0	0	2	3	6	4	1	4	1	2	1							
8									1				0	0	0	0	0	2	3	2	0	1	2	0								
9													0	0	0	2	2	3	1	3	1	1	0									
10													0	0	1	1	0	0	0	0	0	0										
11													0	0	2	0	0	2	0	0	0											
12							1						0	1	0	0	1	0	0	0												
13										2	2		0		0	0	0	0	0													
14													0		0	0	0	0														
15													0		0	0	1															
16													0		0	0																
17													0		0																	
18													0																			
19													0																			
20																																
21							1																									
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table XXXI. LOSS DATA OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																57	37	0	0	0	0	4	14	34	3	2	0	0	0	3	0	
2															144	9	0	10	14	0	17	13	0	13	0	4	0	3	8	0		
3														320	11	0	5	22	0	23	14	10	0	0	0	0	0	13	5			
4													182	90	61	62	54	42	63	48	45	30	67	53	27	44	44	40				
5												103	40	68	60	83	42	44	46	48	77	35	69	71	67	60	61					
6											35	49	16	16	17	15	6	28	32	44	52	29	31	19	15	22						
7										14	14	19	8	7	0	8	8	22	9	27	38	8	14	24	4							
8									10	4	4	0	2	0	7	1	1	9	12	20	13	12	20	9								
9								14	5	0	6	5	2	9	4	4	2	4	10	21	8	8	9									
10							5	0	5	0	1	1	3	9	3	25	11	24	10	16	12	13										
11						3	7	1	0	4	0	3	1	4	6	4	1	16	29	26	58											
12					1	0	0	0	0	10	5	3	2	1	0	2	1	5	4	21												
13				4	4	3	0	5	0	1	1	0	0	5	3	4	2	0	5													
14			3	3	0	2	2	0	0	0	1	2	0	0	4	3	1	0														
15		2	0	0	0	0	1	0	5	0	2	2	2	0	0	2	2															
16	2	0	1	0	0	2	0	0	3	0	0	2	1	3	0	1																
17	1	3	0	1	0	0	0	0	0	1	1	4	0	0	1																	
18	0	0	0	0	4	2	4	3	1	2	1	0	0	2																		
19	0	0	0	1	4	5	3	2	0	2	4	1	9																			
20	6	6	1	3	3	6	3	5	6	16	18	9																				
21	0	0	2	0	7	4	0	5	3	6	6																					
22	1	0	4	2	1	0	1	0	0	0																						
23	3	1	0	0	2	0	1	0	2																							
24	2	0	1	0	0	5	1	2																								
25	1	1	0	0	1	0	0																									
26		3	1	1	1	5																										
27		0	0	1	1																											
28		2	1	0																												
29		0	3																													
30		2																														

Table XXXII. LOSS DATA OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0	0	0	0	0	0	1	0	0	3	1	0	0	0	0	0	
2															3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0		
3														21	0	0	0	0	1	4	0	0	3	0	5	0	0	0	0			
4													13	1	1	3	3	4	3	2	1	0	0	9	1	9	5	3				
5												0	0	3	1	0	1	6	0	0	1	5	3	2	4	8	3					
6											1	1	1	0	1	1	1	0	3	4	0	2	2	2	1	0						
7											0	0	0	0	1	2	0	2	0	2	2	2	1	2	1							
8											0	2	0	0	1	1	0	1	2	3	1	3	3	0								
9								0			0	0	0	0	0	0	1	2	2	0	1	0	2									
10							0	0		1	0	0	0	1	0	1	3	1	3	0	1	0										
11						0	0	0			0	0	0	1	0	0	1	3	6	2	5											
12						0	0	0			0	1	0	1	0	0	0	0	0	1												
13						0	0	0			0	0	0	0	1	0	0	1	0													
14						0	0	0	0		0	0	1	1	0	0	1	1														
15						0	0	0	0		0	0	0	0	0	0	0															
16						1	0	0	1		0	0	2	0	0	0																
17							0	0			0	0	0	0	0																	
18					0		0	0			0	0	0	0																		
19					0		0	0			0	0	0																			
20					0		0	0			0	1																				
21					0		0	1			0																					
22					0		0																									
23					0		0																									
24					0		0																									
25					1		1																									
26																																
27																																
28																																
29																																
30																																

Table XXXIII. LOSS DATA OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	
2															1	0	0	1	1	1	1	1	0	0	0	1	0	0		1		
3														4	1	0	0	1	0	1	0	1	1	0	0	1	0	0				
4													1	0	0	1	1	1	0	2	0	2	1	0	0	1	3	0				
5													0	0	0	0	0	0	0		1	0	0	2	3	0	0					
6												1	1	0	0	2	2	0	0		0	0	1	1	1	0						
7													0	0	0	0		0	0		1	0	1	2	0							
8													1	0	0	0		0	0		0	1	1	1								
9														0	0	0		0	0		0	0	0									
10														0	0	0		0	1		0	1										
11														0	0	1		0			1											
12														0	0			1														
13														0	0			0														
14														0	0			0														
15														0	0																	
16														0	0																	
17	0													0	0																	
18	0													0																		
19	0					1																										
20	0																															
21	1																															
22		0																														
23		0																														
24		1																														
25																																
26																																
27																																
28																																
29																																
30																																

Table XXXIV. LOSS DATA OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																52	10	0	0	0	0	0	5	21	0	0	0	0	0	10	0	
2															138	1	0	0	0	0	3	0	0	0	0	0	0	0	5	0		
3														288	0	0	0	0	0	11	0	0	0	0	0	0	0	6	4			
4													159	61	35	37	39	10	19	16	2	0	28	10	11	33	26	20				
5												130	58	40	46	63	32	34	20	34	40	16	47	53	64	48	40					
6											26	13	10	5	6	4	6	14	21	27	20	10	11	7	2	3						
7										11	7	6	2	1	0	1	1	10	4	9	10	2	4	8	1							
8									9	4	2	0	0	0	3	1	0	3	8	12	0	3	3	0								
9								9	5	0	2	0	1	1	4	0	2	3	3	1	1	0	1									
10							8	0	4	0	0	0	1	6	4	15	11	18	8	4	2	1										
11						3	0	0	0	0	0	1	1	0	2	0	2	5	20	13	17											
12					1	0	0	0	0	5	3	2	1	0	0	0	0	1		3												
13				2	2	0	0	0	0	1	0	0	0	0	0	0	0	0														
14			2	2	0	0	1	0	0	0	0	2	0	0	1	0	1	0														
15		3	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0															
16	4	0	3	0	0	0	0	0	3	0	1	3	4	1	0	0																
17	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1																	
18	0	0	0	0	1	0	3	2	0	1	0	0	0	0																		
19	0	0	2	1	2	6	0	0	0	0	1	0	0																			
20	0	1	0	2	2	5	1	2	0	0	1	1																				
21	0	0	0	0	4	3	1	2	0	1	2																					
22	1	0	3	1	1	0	1	0	1																							
23	1	1	0	0	1	0	0	1	1																							
24	0	1	1	0		4	1	1																								
25	1	0	0	0		0	0																									
26		0	0	0		1																										
27		0	0	0																												
28		1	1	0																												
29			1																													
30																																

Table XXXV. LOSS DATA OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																2	27	11	10	19	0	6	3	12	6	4	0	0	0	0	0	
2															10	9	2	13	23	5	16	15	11	12	5	11	4	8	3	2		
3														68	28	15	7	29	19	17	16	20	21	11	18	14	4	8	4			
4													45	32	28	30	20	38	47	34	44	36	40	50	14	24	28	24				
5												0	0	31	17	20	10	18	26	15	40	27	30	25	17	22	30					
6											11	38	8	11	13	14	3	14	15	23	34	23	24	15	16	19						
7										3	7	13	5	6	2	9	6	14	6	20	31	8	13	21	4							
8									1	0	2	3	7	0	5	1	2	8	5	11	14	14	21	11								
9								5	0	2	4	5	1	8	0	5	1	3	10	20	8	9	11									
10							0	0	1	0	2	3	2	5	0	11	4	7	5	13	11	13										
11						0	7	2	2	4	0	1	0	5	4	6	0	15	18	17	48											
12					0	0	1	0	1	5	2	2	0	3	2	2	1	5	3	19												
13				2	2	4	1	5	1	0	1	1	1	5	5	4	2	2	5													
14			1	1	0	4	2	1	1	0	1	0	0	1	3	3	1	1														
15		0	1	0	0	0	1	0	0	0	1	2	1	0	0	2	2															
16	0	0	0	0	0	5	0	0	1	0	0	0	0	2	0	1																
17	1	2	0	1	0	0	1	0	0	1	2	4	0	0	0																	
18	0	0	0	1	1	2	1	1	1	1	1	0	0	2																		
19	1	0	0	1	2	0	3	2	0	2	3	1	9																			
20	6	5	2	1	3	1	2	3	6	15	18	9																				
21	1	0	3	0	3	1	0	4	3	6	4																					
22	0	0	0	1	0	0	1	0	0	0																						
23	2	0	0	0	1	0	1	0	0																							
24	2	0	0	0	0	1	0	2																								
25		1	0	0	2	0	1																									
26		3	1	1	1	4																										
27		0	0	1	1																											
28		1	0	0																												
29		0	2																													
30		2																														

Table XXXVI. LOSS DATA OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																291	457	228	56	84	112	179	165	108	80	104	167	105	44	33	100	
2															50	35	61	33	54	30	54	86	111	118	36	71	100	22	37	119		
3														47	23	17	0	9	9	3	27	56	8	8	16	26	7	25	28			
4													170	93	63	59	33	9	0	6	25	48	5	27	18	8	22	65				
5												235	253	162	164	146	44	40	25	57	29	33	40	27	19	61	96					
6											226	248	302	284	204	160	124	123	96	158	118	208	143	78	76	156						
7										201	237	239	260	147	152	111	99	161	251	223	186	283	253	213	162							
8									84	144	191	147	75	22	54	69	122	184	135	140	114	193	233	210								
9								135	43	84	60	33	38	26	29	26	56	92	58	49	65	70	87									
10							30	185	110	129	68	41	0	21	60	117	55	73	33	38	16	30										
11						18	26	72	67	52	32	24	40	16	24	54	63	111	79	85	115											
12					15	15	13	21	31	3	19	25	17	15	46	30	45	27	37	26												
13				7	14	18	7	20	21	2	13	15	21	16	33	10	10	33	19													
14			12	15	14	1	13	9	14	9	5	9	16	17	17	8	30	12														
15		0	3	14	10	12	0	11	0	0	11	1	27	3	9	28	22															
16	0	3	10	10	19	19	12	0	11	4	9	7	16	19	24	14																
17	9	15	13	7	6	15	21	9	5	27	23	18	10	0	14																	
18	19	14	15	30	15	18	16	10	26	30	27	11	22	31																		
19	48	19	26	25	46	42	52	68	42	61	57	54	39																			
20	75	40	49	50	100	85	119	101	128	148	139	86																				
21	26	24	35	15	43	50	38	47	37	60	40																					
22	18	14	19	23	30	11	23	24	24	40																						
23	13	13	14	8	18	6	9	6	30																							
24	22	13	24	7	18	9	16	40																								
25	10	17	16	13	15	17	25																									
26	32	13	29	18	26	49																										
27	12	13	12	5	33																											
28	10	11	12	29																												
29	15	9	22																													
30	18	14																														

Table XXXVII. LOSS DATA OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																20	17	8	6	6	4	6	4	0	8	5	11	13	2	0	16	
2															6	4	0	0	3	6	3	4	3	6	5	9	3	1	1	9		
3														3	0	0	0	2	3	0	2	2	1	0	0	2	0	0	6			
4													0	1	0	0	0	1	0	0	0	4	1	1	3	0	3	1				
5												0	1	7	2	2	1	1	2	3	0	1	2	1	2	0	2					
6											2	1	4	10	4	2	2	0	2	0	1	5	4	0	4	0						
7										1	1	0	2	6	3	0	2	7	2	1	1	6	4	7	2							
8									0	0	0	0	0	1	0	0	1	3	3	2	4	6	4	5								
9								0	1	0	0	1	1	3	0	1	1	2	0	2	1	1	1									
10							0	0	0	0	2	0	0	2	0	1	3	4	2	1	0	2										
11						0	0	0	0	0	0	0	1	1	1	0	2	0	2	2	4											
12					0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2												
13				0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0													
14				0	0	0	0	0	0	0	0	1	0	1	1	0	0	0														
15		0		0	0	0	0	0	0	0	0	0	0	1	0	1	0															
16		0		0	0	0	0	0	0	0	0	0	0	2	1	1																
17		0		0	0	0	0	0	0	0	0	0	0	0	0																	
18		0		0	0	0	0	0	1	0	0	0	0	1																		
19		0		0	0	1	0	0		0	0	1	0																			
20		0		1	1	1	0	3		0	1	2																				
21		0			0	1	0	0		0																						
22		0			0	1	0	0		0																						
23		0			0		0	0																								
24		0			0		0	1																								
25		0			0		0																									
26		0			1																											
27		0			1																											
28		0																														
29		0																														
30		0																														

Table XXXVIII. LOSS DATA OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																6	4	8	1	1	1	1	5	0	4	0	10	9	2	4	6	
2															0	0	2	0	1	0	1	3	4	5	3	3	5	1	3	16		
3														0	0	0	0	0	0	1	0	1	0	0	3	0	0	0	0			
4													0	1	0	0	0	1	0	1	0	0	0	2	0	1	1	4				
5												2	1	1	0	1	0	1	0	0	0	2	0	2	0	1	4					
6											2	1	0	0	0	1	0	0	0	0	0	4	1	3	5	2						
7										0	0	1	1	2	4	0	0	0	0	0	2	1	2	6	7							
8									0	0	0	0	1	0	0	0	0	3	0	0	1	1	2	6								
9								0	0	1	2	1	1	0	0	0	0	0	0	0	0	1	1									
10							0	0	1	1	0	0	1	0	0	0	0	1	0	0	0	2										
11						0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	2											
12					0	0	0	1		1	0	0	0	0	0	1	0	0	0	0												
13				0	0	0	0	0		0	0	0	0	0	0	0	0	0	0													
14				0	0	0	1	0		1	0	0	0	0	0	0	0	0														
15		0		0	0	0	0	0			0	0	0	0	0	0	0															
16		0		0	0	0	0	0	0		1	0	0	1	0	0																
17		0		0	0	0	0	0	0			0	0	0	0																	
18		0	1	0	0	0	0	0	0			0	0	0																		
19		0		0	0	1	0	1	0			0	0																			
20		0		1	0	0	1	1	0			0																				
21		0		1	0	0	0	0	0																							
22		0		1	0	0	0	0	0																							
23		0		0	0	0	0	0	0																							
24		0		1	0	0	1	0																								
25		0			0	1																										
26		1			0																											
27					1																											
28																																
29																																
30																																

Table XXXIX. LOSS DATA OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																335	486	252	64	93	120	189	176	106	87	119	195	120	51	45	118	
2															57	40	62	34	61	42	61	95	121	138	45	88	110	35	38	139		
3														51	22	17	0	11	16	1	30	59	8	7	19	28	9	23	36			
4													172	97	64	61	32	12	0	6	24	52	6	30	21	10	25	70				
5												237	255	171	168	150	47	40	29	60	29	36	42	30	21	59	103					
6											231	253	308	296	210	162	124	121	96	154	117	220	148	82	83	155						
7										203	240	239	268	154	159	111	101	167	252	222	188	285	257	229	173							
8									85	144	192	147	74	22	54	71	123	189	135	139	121	204	235	223								
9								137	44	85	62	35	41	31	27	27	58	94	57	51	65	74	87									
10							29	185	110	130	70	42	0	25	61	117	58	80	32	38	15	33										
11						19	26	73	70	52	31	24	42	17	26	55	65	109	84	88	124											
12					15	15	13	22	31	4	20	25	18	15	47	31	45	27	37	29												
13				7	14	19	7	20	21	2	13	15	21	15	34	10	10	33	17													
14			13	15	14	1	14	9	14	10	6	10	16	18	18	8	30	12														
15		0	3	14	10	11	0	11	0	0	10	1	28	4	7	28	22															
16	0	3	9	9	19	18	12	0	11	5	9	7	16	22	25	17																
17	9	15	14	7	4	15	23	10	5	27	25	18	10	0	14																	
18	19	14	16	31	15	19	16	10	27	30	27	11	23	32																		
19	49	19	26	25	46	44	53	68	42	61	58	55	39																			
20	76	40	49	54	105	86	122	107	128	149	140	91																				
21	26	24	35	17	43	51	38	45	37	61	40																					
22	18	14	19	24	30	12	23	24	24	41																						
23	13	13	14	8	18	7	10	6	30																							
24	22	12	24	9	18	9	18	41																								
25	10	18	16	14	15	18	26																									
26	32	15	29	19	27	49																										
27	12	13	12	5	35																											
28	10	11	12	30																												
29	15	9	22																													
30	17	14																														

Table XL. LOSS DATA OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0		0	0	0	0	1	2	1	5	0	0	7	0	0	6	
2																0	1	0	0	0	0	0	2	0	0	0	2	0	2	8		
3														0		0	0	0	0	0	0	0	1	0	2	0	0	4	0			
4														0		0	0	0	0	0	0	0	0	1	0	0	1	1				
5												0		0		0	0	2	0	1	0	0	0	0	1	2	3					
6											0	0		1		2	1	2	2	3	3	0	2	0	4	4						
7											0	1		1		0	1	1	2	2	2	3	6	2	4							
8											0			1		0	0	1	1	4	3	1	6	3								
9											0			0		0	0	1	2	1	1	0	3									
10											0			0		1	0	0	2	2	1	1										
11											1			0		0	1	2	1	2	0											
12														0		0	0	0	1	0												
13														2		0	0	0	2													
14														0		0	0	0														
15														0		1	0															
16														0		0																
17														0																		
18														0																		
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table XLI. LOSS DATA OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0	110	5	18	32	0	32	29	29	33	33	8	0	19	36	48	
2															0	7	18	21	17	0	32	8	26	19	13	45	33	18	9	16		
3														1	3	22	10	14	12	16	10	3	21	26	25	17	22	8	9			
4													42	24	17	48	65	46	60	36	69	89	76	109	93	107	29	22				
5												87	78	78	83	98	95	92	95	104	106	83	78	92	104	120	156					
6											59	28	40	49	39	27	19	21	24	27	39	36	26	30	19	29						
7										35	15	21	21	46	34	26	29	34	33	47	43	45	66	65	75							
8									23	13	15	20	16	12	12	6	15	24	27	23	32	22	49	55								
9								17	6	4	5	7	3	14	2	0	0	20	18	10	6	0	9									
10							10	10	12	17	13	18	5	9	5	29	11	18	18	10	14	10										
11						5	13	12	18	20	15	11	16	8	0	12	14	23	25	19	18											
12					7	1	5	3	18	8	8	11	5	8	11	10	10	13	10	15												
13				6	5	1	6	14	8	13	1	9	7	5	7	9	4	15	7													
14			11	8	3	3	6	10	2	8	5	3	4	7	4	2	3	6														
15		0	0	1	1	1	0	6	3	0	7	11	5	2	2	4	2															
16	3	1	0	1	2	0	0	0	0	3	0	0	2	4	1	4																
17	4	5	2	2	1	1	1	1	3	4	2	2	2	0	1																	
18	1	5	3	2	2	0	1	1	1	7	0	1	4	4																		
19	8	4	3	3	0	2	6	5	2	4	7	1	8																			
20	19	14	29	10	16	5	6	6	12	8	7	7																				
21	5	7	5	8	7	3	6	6	4	6	2																					
22	4	1	5	3	2	2	7	3	3	1																						
23	0	5	2	3	3	1	2	0	1																							
24	9	2	5	4	6	0	3	2																								
25	4	5	5	2	4	5	7																									
26	13	5	7	2	6	11																										
27	8	1	3	8	9																											
28	4	5	3	11																												
29	9	4	10																													
30	10	14																														

Table XLII. LOSS DATA OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0	1	1	1	0	0	0	1	1	1	1	2	2	0	0	3	
2																0	0	0	1	0	1	1	0	1	0	0	0	0	0	0		
3														0		1	1	0	1	0	0	0	0	1	0	0	0	0	0			
4													1	0		0	1	0	1	0	3	1	1	0	0	0	0	0				
5												0		0		0	2	2	1	2	1	0	1	0	1	0	2					
6											0	1		0		1	1	0	0	0	1	0	1	0	0	1						
7										0	0			0		1	0	0	0	0	2	1	0	0	0							
8									0	0	1			0		0	0	0	1	1	0	1	1	1								
9									0	0				0		0	0	2	1	1	0		0									
10							0		0	0				0		0	1	0	1	0	0											
11							0		1	0				0		0	3	1	2	1	0											
12							0			1				0		0			0													
13							0			1				0		0			1													
14							0			0				1		0																
15							0			0						0																
16							0			0						0																
17							0			0																						
18							0			0																						
19							0			0																						
20							0			0																						
21							0			0																						
22							0			0																						
23							0																									
24							0																									
25							0																									
26																																
27																																
28																																
29																																
30																																

Table XLIII. LOSS DATA OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1	0	0		2		5	1	1	4	0	0	0	1	3	1	
2																	0	0			0	0	0	0	0	1	0	1	1	1		
3														0			0	0			0	0	0	3	1	1	0	0	1			
4													0	0			1	1			0	1	0	3	0	2	1	1				
5												0	0	0			0				0	2	1	2	2	0	4					
6												0	1	1			0				1	0	0	0	1	0						
7										0		0		0			0				1	1	0	0	0							
8									1	0		1		0			0						2	1								
9								1		0		0		0			0						1									
10										0		0		0			0															
11							0			0		0		0			0															
12							0			0		0		1			0															
13							0			0		0					0															
14							0			0		0					0															
15							0			0		0					0															
16							0			0		1																				
17							0			0		0																				
18							0			0		0																				
19							0			1		0																				
20							0					0																				
21							0																									
22							0																									
23							0																									
24							0																									
25							0																									
26		0																														
27		0																														
28		0																														
29		0																														
30		0																														

APPENDIX D - PROMOTION-ELIGIBLE DATA

Table XLIV. PROMOTION-ELIGIBLE DATA OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1125	1132	1133	969	1118	1199	1057	1218	937	839	1336	1185	1228	1102	878	759	
2															1063	1186	1010	1058	979	1204	1209	1138	1259	1018	952	1410	1232	1348	1144	942		
3														1167	1049	1240	1124	1191	1028	1164	1231	1106	1252	1022	952	1407	515	1305	1155			
4													1060	902	810	1034	962	1042	967	1073	1088	992	1107	903	845	1270	1122	1215				
5												525	42	39	40	59	48	59	80	92	103	14	21	43	28	136	81					
6											1	1	1	0	1	5	1	0	1	0	0	1	0	0	2	2						
7										506	454	421	468	363	373	469	461	580	500	527	498	477	572	471	408							
8									391	422	380	368	391	298	318	385	395	481	409	425	416	414	512	391								
9								441	338	370	326	322	320	277	292	356	359	433	347	379	375	367	445									
10							89	156	199	172	150	83	103	38	60	170	143	258	286	329	352	339										
11						10	7	25	37	16	22	8	11	4	5	2	17	42	45	75	76											
12					317	256	265	292	251	286	240	242	298	249	241	256	273	297	248	268												
13				298	309	248	251	270	237	282	237	231	293	238	230	249	263	284	235													
14			437	281	293	237	231	258	211	270	228	220	281	231	223	242	255	268														
15		357	428	275	265	203	159	216	165	196	213	215	266	210	217	235	235															
16	297	204	230	94	94	78	29	56	35	53	45	60	82	67	113	83																
17	95	134	142	74	66	43	22	48	32	51	37	54	71	56	68																	
18	233	230	274	187	231	187	211	195	163	200	167	161	64	49																		
19	227	229	274	170	223	186	209	188	156	189	163	154	56																			
20	216	220	258	160	214	175	206	173	145	184	153	150																				
21	183	192	233	134	185	154	163	135	118	155	124																					
22	114	99	146	73	102	64	53	65	62	90																						
23	44	44	56	24	36	34	32	33	34																							
24	34	33	46	18	25	24	23	27																								
25	24	23	30	16	18	17	16																									
26	18	17	25	11	13	12																										
27	62	90	91	52	77																											
28	52	78	80	44																												
29	39	65	66																													
30	30	50																														

Table XLV. PROMOTION-ELIGIBLE DATA OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																34	63	102	66	61	67	65	69	82	67	116	97	81	98	77	84	
2															28	46	52	85	69	63	65	69	60	75	75	113	97	92	93	78		
3														34	29	48	49	92	69	63	63	66	62	69	69	111	51	88	89			
4													25	29	20	39	42	81	66	57	54	54	56	58	64	90	86	78				
5												3	1	1	1	3	2	3	6	3	7		2	5	1	15	7					
6																										1						
7										9	10	7	17	12	10	25	30	46	36	27	30	22	28	39	38							
8									1	8	10	7	16	10	10	22	27	37	34	23	25	22	25	36								
9								1	1	7	7	6	14	10	8	20	24	34	28	20	19	20	20									
10										3	2	1	5	4	4	11	16	24	25	17	17	17										
11																	1	7	4	2	6											
12					4	2	6		1	4	6	4	12	5	9	14	16	21	19	17												
13				3	3	2	6		1	4	6	4	10	4	9	14	15	21	19													
14			3	3	3	1	6		1	4	5	4	10	4	9	14	13	19														
15		1	3	2	4	1	2		1	4	5	3	10	4	9	13	11															
16	3	1	1		2	1				2	1		3	3	7	5																
17	1	1	1		1					2	1		3	4	3																	
18	2		3	2	4	1	5			2	5	3	3	3																		
19	2		3	2	4	1	5			2	5	3	3																			
20	1		3	2	4	1	5			2	5	2																				
21	1		3	2	3	1	5			2	3																					
22			2		2	1	3																									
23					1		3																									
24							2																									
25							1																									
26																																
27	1		2		2																											
28	1		2																													
29	1		2																													
30	1																															

Table XLVI. PROMOTION-ELIGIBLE DATA OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																2	4	10	3	3	22	17	19	43	51	63	53	47	47	62	43	
2															4	5	1	12	4	3	20	24	20	44	54	58	56	51	50	65		
3														8	4	3	4	13	5	3	21	23	20	42	53	56	28	51	52			
4													3	6	4	3	3	13	4	4	16	22	20	31	49	54	49	42				
5																	1	3					1	2	2	11	9					
6																																
7										1	2	1	2	2	3	2	2	8	2	2	10	8	11	16	24							
8									3	1	1	1	1	2	2	2	1	8	2	2	8	7	10	15								
9								3	3	1	1	1	1	2	2	2	1	7	2	2	6	7	7									
10									2	1	1					2		4	1	1	5	4										
11																		3		1	2											
12					2		1	2	3	1			1	2	2		1	4		1												
13				1	2		1	2	3	1			1	2	2		1	3														
14				1	2		1	2	3	1			1	1	2		1	3														
15				1	2		1	2	2	1			1	1	2		1															
16	2				1				1	1			1		1																	
17	2				1				1	1			1		1																	
18				1	1		1	1	2					1																		
19				1	1		1		2																							
20				1	1		1		2																							
21				1			1		1																							
22				1																												
23																																
24																																
25																																
26																																
27				1																												
28																																
29																																
30																																

Table XLVII. PROMOTION-ELIGIBLE DATA OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1174	1211	1260	1058	1203	1303	1175	1318	1083	990	1557	1391	1381	1266	1048	935	
2															1107	1248	1075	1168	1068	1278	1307	1263	1350	1163	1115	1626	1439	1522	1306	1123		
3														1222	1096	1303	1189	1308	1109	1233	1326	1218	1348	1158	1106	1619	617	1473	1318			
4													1102	947	845	1088	1017	1135	1036	1139	1167	1091	1194	1012	986	1453	1297	1356				
5												531	43	40	42	62	50	61	89	95	112	14	24	49	32	168	98					
6											1	1	1		1	5	1		1			1			1	3						
7										520	470	432	489	378	390	498	491	619	533	553	536	515	616	538	484							
8									394	434	394	378	410	311	330	411	422	511	445	451	448	453	550	452								
9								446	342	382	337	331	337	290	301	378	384	460	377	403	399	403	475									
10							89	157	201	178	155	85	108	42	63	184	161	280	312	348	374	369										
11						10	7	26	37	16	21	8	11	4	5	2	18	57	50	78	86											
12					324	260	272	294	256	294	250	248	312	257	254	270	290	313	264	286												
13				303	315	252	258	272	242	288	245	236	305	246	243	263	278	299	251													
14			440	286	299	240	238	260	217	278	237	224	293	238	236	255	269	281														
15		358	431	279	272	206	162	218	169	202	222	218	278	217	230	247	247															
16	303	205	231	94	98	82	29	56	37	56	48	60	86	71	123	89																
17	98	135	143	74	69	44	22	48	33	54	40	54	75	61	74																	
18	236	230	277	192	237	188	218	196	166	204	173	164	189	169																		
19	230	229	277	174	230	187	216	188	159	193	169	157	177																			
20	218	220	261	164	221	176	212	173	148	188	159	152																				
21	185	192	236	138	190	155	169	135	120	158	128																					
22	115	99	148	74	106	65	57	65	63	90																						
23	45	44	56	24	38	35	36	33	35																							
24	34	33	46	18	25	24	26	27																								
25	24	23	30	16	18	17	18																									
26	18	17	25	11	13	12																										
27	63	90	93	55	79																											
28	53	78	82	46																												
29	40	65	68																													
30	31	50																														

Table XLVIII. PROMOTION-ELIGIBLE DATA OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3	2			5	18	15	19	18	14	19	19	15	29	41	39	
2																			5	20	17	16	19	17	18	18	21	17	30	42		
3																	1	5	14	23	19	20	17	17	18	17	8	18	29			
4													1				1	16	19	20	18	20	16	17	17	17	23	18				
5																		5	1	1				1			3					
6																																
7													1	1	2	5	6	21	14	17	7	14	10	7	4							
8									1				1	1	5	5	4	18	8	13	6	10	9	5								
9														1	5	5	1	16	5	11	6	8	7									
10																2		7	4	8	5	7										
11											1							1														
12													1	1	2	2	2	11	6	9												
13										2	2		1		2	2	2	11	6													
14													1		2	2	1	11														
15													1		2	2	1															
16													1																			
17													1																			
18																																
19																																
20							1																									
21							1																									
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table XLIX. PROMOTION-ELIGIBLE DATA OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																332	198	304	305	343	458	309	339	334	228	230	183	169	161	167	174	
2															391	261	149	276	317	357	470	305	325	300	225	228	195	185	172	164		
3														608	246	264	164	303	299	386	454	289	323	287	229	224	97	163	162			
4													299	288	230	274	154	273	299	364	440	282	355	297	232	238	219	169				
5												119	25	25	29	33	44	66	39	69	72	4	34	29	42	50	36					
6																2	1	2	1					1	2							
7										62	80	63	61	114	97	124	58	168	161	227	266	188	188	155	123							
8									43	49	66	44	53	107	98	117	50	146	152	200	228	180	174	131								
9								36	32	45	62	45	35	109	91	116	49	137	141	180	215	168	153									
10								12	11	15	15	10	16	14	32	39	21	92	110	145	205	159										
11							5	7	6	9	9	3	2	4	8	5	4	17	24	56	68											
12					14	17	9	22	21	37	53	36	44	86	76	79	32	92	92	105												
13				17	13	20	10	23	23	29	51	35	42	85	76	77	31	88	88													
14			11	15	11	20	11	21	27	32	53	35	43	82	75	77	32	87														
15		16	8	12	7	11	8	18	20	21	52	31	43	82	69	73	28															
16	13	9	7	4	6	6	3	9	7	8	20	12	21	34	34	27																
17	8	9	7	8	15	19	12	19	14	28	34	22	24	51	18																	
18	7	9	9	7	23	22	11	20	15	27	33	19	24	54																		
19	8	9	11	8	17	22	9	19	14	26	32	19	24																			
20	8	10	11	8	13	20	8	18	14	25	31	19																				
21	6	6	10	7	13	14	5	14	10	13	21																					
22	4	6	5	5	6	7	3	8	5	4																						
23	2	3	2	1	3	6	2	7	5																							
24	1	2	2	1	2	7	1	6																								
25	1	1	1	1	2	2																										
26		6	4	4	3	5																										
27		3	3	4	3																											
28		3	3	3																												
29		2	3																													
30		2																														

Table L. PROMOTION-ELIGIBLE DATA OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																11	5	25	17	13	17	34	29	30	35	42	21	8	10	20	28	
2															13	12	7	29	22	16	20	33	32	32	32	41	23	14	12	20		
3														33	10	11	11	33	22	22	21	34	30	32	35	42	13	14	13			
4													15	12	10	13	11	33	20	18	21	34	28	33	30	45	23	15				
5															1	3	3	8	1	5	5	1	1	4	4	6	1					
6																									1							
7											1	4	2	8	7	9	6	23	18	12	19	27	23	20	24							
8											1	4	3	8	6	7	7	21	18	10	17	25	22	18								
9								1			1	2	3	9	5	6	8	20	16	7	16	22	19									
10										1				2	3	1	5	9	13	5	15	22										
11															1		1	4	6	3	7											
12						1	1	1			1	3	3	7	4	6	3	13	5	4												
13						1	1	1			1	2	4	6	4	6	3	13	5													
14						1	1	1	1		1	2	4	6	4	6	4	13														
15									1		1	2	3	5	4	6	3															
16												1	3	1	4	3																
17							1	1			1	1	1	4	1																	
18					1		1	1			1	1	1	4																		
19					1		1	1			1	1	1																			
20					1		1				1	1																				
21					1		1				1																					
22					1		1																									
23					1		1																									
24					1		1																									
25																																
26																																
27																																
28																																
29																																
30																																

Table LI. PROMOTION-ELIGIBLE DATA OF HISPANIC GENERAL UNRESTRICTED LINE OFFICER BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3	2	2	2	2	4	7	8	6	3	12	10	2		10	3	
2															3	4	2	5	2	4	5	7	9	7	5	15	10	4		10		
3														5	2	4	2	4	1	3	4	6	9	7	5	14	8	4				
4													2	1	1	4	2	3	1	2	4	5	8	7	6	13	11	4				
5																1					1		1	2	3							
6																																
7													1	1	1	1		2	1		2	3	6	4	2							
8													1	1	1	1		2	1		2	3	5	2								
9														1	1	1		2	1		2	2	4									
10																			1		2	2										
11																			1		1											
12														1	1			2														
13														1	1			1														
14														1	1			1														
15														1	1																	
16														1																		
17	1														1																	
18	1																															
19	1					1																										
20	1																															
21																																
22		1																														
23		1																														
24		1																														
25																																
26																																
27																																
28																																
29																																
30																																

Table LII. PROMOTION-ELIGIBLE DATA OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																142	91	59	45	51	88	36	50	84	54	57	44	65	44	62	47	
2															221	81	71	70	74	89	100	38	45	63	59	63	57	68	56	52		
3														404	82	86	91	93	79	130	98	41	56	63	70	71	23	61	50			
4													234	116	94	117	88	93	100	119	102	51	105	86	89	101	94	69				
5												113	26	20	29	32	24	22	9	26	16	6	32	27	46	34	23					
6															1	1		1	1			1		1								
7										18	14	9	7	15	12	20	16	42	43	45	40	27	19	17	12							
8									21	8	7	3	5	10	14	19	15	32	39	36	30	25	15	9								
9								12	12	4	5	7	9	9	11	18	18	29	31	24	30	22	12									
10							4	2	6	6	2	7	4	9	5	17	14	25	28	23	29	23										
11						1		1	2	6	3	2	1	6	1		3	6	20	18	23											
12					4	4	1	4	3	4	8	7	6	3	1	5	2	2		2												
13				7	3	5	2	5	5	1	6	5	5	4	3	5	2	2														
14			5	5	1	6	3	5	10	2	6	6	6	4	4	5	4	3														
15		4	3	3	1	8	2	6	10	2	6	4	6	4	3	5	3															
16	3	1	5	1	1	5	2	5	4	1	5	3	6	3	2	5																
17			1	2	8	13	5	8	2	2	2			2	1																	
18			3	3	11	16	6	8	2	2	2			2																		
19	1		5	4	9	16	4	8	2	1	2																					
20	2	1	3	3	7	13	5	8	2	1	2																					
21	2	3	4	4	5	8	4	7	2		2																					
22	3	3	2	2	2	5	2	5	1																							
23	2	2	2	2		4	1	5	1																							
24	1		1	1		5	1	4																								
25	1		1	1		1																										
26		1	1	1		1																										
27		1	1	1																												
28		1		1																												
29																																
30																																

Table LIII. PROMOTION-ELIGIBLE DATA OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																206	119	276	283	311	402	323	333	295	216	230	179	120	134	143	166	
2															191	199	90	244	273	292	405	317	330	283	210	226	181	142	137	151		
3														257	181	195	90	251	249	286	389	299	316	271	205	215	100	127	133			
4													91	189	153	176	82	221	229	270	373	282	298	260	187	201	173	126				
5												8		5	1	5	23	56	31	50	64	1	7	10	9	23	20					
6																1	1	1	1						3							
7										44	67	59	57	115	95	115	50	153	142	198	255	196	204	170	140							
8									24	41	60	46	52	109	93	107	44	139	136	178	224	188	191	149								
9								25	22	41	58	41	29	112	88	106	42	131	132	167	210	174	169									
10							6	10	7	10	13	4	12	11	31	23	13	77	100	131	200	164										
11						6	5	6	6	3	6	1	1	4	8	5	2	16	13	44	56											
12					10	14	9	18	18	34	47	32	41	92	81	80	35	105	99	108												
13				10	10	16	9	19	18	29	47	32	41	89	79	78	34	100	96													
14			6	10	10	15	9	17	18	31	49	31	41	86	77	78	34	98														
15		12	5	9	6	3	6	13	12	20	48	29	40	85	72	74	30															
16	10	8	2	3	5	1	1	5	4	8	16	10	18	33	37	25																
17	9	9	6	6	7	7	9	13	12	26	34	23	25	54	55																	
18	8	9	6	5	13	7	7	13	13	25	32	20	25	57																		
19	8	9	6	5	11	7	7	12	12	25	31	20	25																			
20	7	9	8	5	9	7	5	11	12	24	30	20																				
21	5	6	6	5	9	6	3	8	8	13	20																					
22	1	4	1	4	5	2	3	3	4	4																						
23		1		1	4	2	2	2	4																							
24		1		1	3	2	1	2																								
25		1		1	3	1	1																									
26		5	3	3	3	4																										
27		2	2	3	3																											
28		2	2	2																												
29		2	2																													
30		2																														

Table LIV. PROMOTION-ELIGIBLE DATA OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1585	1622	1575	1224	1322	1292	1862	1623	1475	1181	1778	1947	1678	1262	1515	1393	
2															1483	1050	1046	1137	1168	1238	1179	1683	1458	1367	1101	1673	1780	1573	1216	1482		
3														1337	1432	1258	1104	1314	1113	1205	1123	1594	1344	1248	1064	1598	800	1547	1181			
4													1621	1290	1263	1075	1020	1159	1105	1203	1097	1541	1339	1237	1049	1576	1672	1524				
5												539	56	46	82	36	33	67	76	61	73	139	104	98	65	137	140					
6													1	1	1		2				1				2	5						
7																						1										
8									814	1016	913	671	633	604	826	766	807	972	734	761	741	969	898	896								
9								897	730	871	722	524	506	578	768	697	685	788	598	621	627	775	663									
10							163	387	394	352	239	117	118	63	110	262	195	420	483	532	555	687										
11						8	16	50	66	32	38	11	26	12	10	3	21	75	68	143	138											
12						2	4	8	4	11	8	11	5	4	2		1	2	3	12												
13				309	452	405	452	507	478	600	538	398	482	503	613	470	466	484	390													
14			333	302	438	387	445	487	457	596	529	386	461	488	581	458	451	440														
15		250	321	286	397	346	322	398	335	446	513	369	437	456	553	441	403															
16	284	119	131	93	183	159	118	89	101	128	150	107	139	163	241	158																
17	123	73	76	66	135	115	109	82	91	115	128	83	109	140	160																	
18	115	66	71	65	128	106	100	77	89	114	110	81	102	135																		
19	209	165	218	168	253	227	302	388	320	428	348	261	278																			
20	191	156	204	156	238	211	269	340	292	387	314	232																				
21	168	145	185	142	215	181	212	274	216	299	246																					
22	89	66	111	80	110	72	63	109	93	163																						
23	39	29	47	25	47	44	47	62	49																							
24	30	21	32	20	28	32	39	47																								
25	24	14	26	16	19	28	29																									
26	81	72	78	74	89	78																										
27	66	67	67	66	77																											
28	56	55	56	60																												
29	43	38	39																													
30	28	27																														

Table LV. PROMOTION-ELIGIBLE DATA OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																40	39	35	29	28	30	48	35	29	47	34	46	47	48	48	80	
2															24	17	21	24	23	22	26	42	31	30	39	29	35	34	46	48		
3														47	18	16	22	27	20	16	23	37	27	24	34	20	21	33	44			
4													11	44	12	15	21	24	17	18	21	36	27	24	34	18	32	33				
5												1	1	1			1	3	1	2	2	2		5	5		5					
6																									1							
7																																
8									2	1	3	5	4	20	9	12	17	16	14	16	20	20	16	15								
9								5	2	1	3	5	4	17	9	12	16	13	11	14	16	14	12									
10								2			2	2	2	2	1	3	2	6	10	11	14	12										
11													1		1		1		2	2	5											
12																				1												
13				1	2	5	2	5	1	1	1	4	3	13	8	10	10	7	7													
14				1	2	4	1	5	1	1	1	4	3	12	7	10	10	6														
15		1		1	2	4	1	2	1	1	1	3	3	7	5	10	10															
16				1	1	3		1			1	3		4	2	2																
17				1	1	3		1			1	3		3	2																	
18				1	1	3		1			1	3		3																		
19		1			2	1	1	4					3																			
20		1			2	1	1	4																								
21		1			2	1	1	2																								
22						1		1		1																						
23								1																								
24								1																								
25																																
26		1			2																											
27		1			1																											
28		1																														
29		1																														
30		1																														

Table LVI. PROMOTION-ELIGIBLE DATA OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																10	7	17	3	6	12	28	19	41	37	35	63	62	50	76	59	
2															6	3	3	6	2	5	11	27	14	47	33	36	53	53	48	72		
3														7	7	4	1	9	1	6	10	24	10	42	30	33	28	52	45			
4													6	7	6	3	1	8	1	5	10	23	11	42	27	33	48	52				
5												2		1	1							2	2	10	2	7	7					
6																										1						
7																																
8										4	3	2	4	3	3	2	2	7	1	4	8	17	8	29								
9								4		4	3	2	3	3	3	2	2	4	1	4	7	16	6									
10										1							1	1	1	4	7	13										
11																			1		3											
12																																
13				4	1	2	3	3	2	1	1	1	1	3	3	1	2	3	1													
14				4	1	2	3	3	2	1	1	1	1	3	3	1	2	3														
15		1		4	1	2			2		1	1	1	3	3	1	2															
16				2		2			1		1		1	2																		
17				2		1					1		1	1																		
18				2		1							1	1																		
19		1		2	1	1	2	3	1			1																				
20		1		2	1	1	2	2	1			1																				
21		1		2	1	1	1	1	1																							
22				1		1	1		1																							
23				1		1	1																									
24				1		1	1																									
25						1																										
26		1			1																											
27																																
28																																
29																																
30																																

Table LVII. PROMOTION-ELIGIBLE DATA OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1659	1677	1632	1257	1357	1333	1946	1679	1563	1263	1846	2061	1790	1340	1647	1516	
2															1527	1071	1070	1165	1193	1264	1212	1757	1503	1457	1176	1726	1866	1670	1287	1602		
3														1396	1469	1283	1129	1346	1130	1219	1149	1658	1378	1318	1129	1634	848	1630	1250			
4													1649	1345	1293	1094	1043	1187	1116	1219	1120	1603	1374	1308	1112	1610	1746	1610				
5												544	57	47	85	36	32	71	74	64	76	144	107	112	72	143	151					
6													1	1	1		2				1				3	7						
7																																
8									822	1025	922	682	646	627	846	783	828	995	739	779	764	1010	921	941								
9								912	737	880	730	535	517	598	788	712	705	806	603	640	643	805	684									
10							163	390	399	354	243	120	121	67	113	265	199	428	488	547	570	711										
11						8	16	51	69	32	38	11	28	12	11	3	22	74	73	148	148											
12						2	4	8	4	11	8	11	5	4	2		1	2	3	14												
13				322	458	413	463	519	481	606	542	406	489	516	631	482	479	495	392													
14			335	315	444	394	456	499	460	602	533	394	468	502	598	471	464	450														
15		253	322	299	403	353	328	404	338	449	516	376	444	465	568	454	416															
16	285	120	132	98	189	164	120	91	101	129	153	111	141	170	247	162																
17	124	73	78	71	138	119	111	84	91	116	131	87	111	145	165																	
18	116	66	71	70	131	110	101	78	89	115	112	85	104	140																		
19	210	169	218	176	258	231	311	397	322	431	348	264	281																			
20	191	160	204	164	243	215	277	348	294	390	314	235																				
21	168	149	185	150	218	185	217	277	218	301	246																					
22	89	67	111	83	110	75	66	110	94	165																						
23	39	29	47	28	47	46	50	63	50																							
24	30	21	32	23	28	33	41	48																								
25	24	14	26	17	19	29	30																									
26	81	76	78	77	92	79																										
27	66	69	67	68	79																											
28	56	57	56	62																												
29	28	40	39																													
30	4	29																														

Table LVIII. PROMOTION-ELIGIBLE DATA OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3		4	6	17	15	18	29	17	27	34	39	40	38	52	57	
2																4	4	8	6	12	16	17	27	16	22	40	40	33	39	54		
3														7		5	3	9	10	17	19	17	25	18	23	45	14	38	37			
4														7		5	4	9	13	19	19	17	24	18	21	45	38	34				
5														1			2	1	3					2	1	3	3					
6																																
7																																
8											1			6		3	2	5	15	13	14	14	16	15								
9											1			5		3	2	4	14	9	11	13	10									
10																1		2	11	8	10	12										
11																		1														
12																																
13														5		2	1	1	8													
14														3		1	1	1														
15														3		1	1															
16																																
17																																
18																																
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LIX. PROMOTION-ELIGIBLE DATA OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																383	521	452	467	466	456	480	516	663	575	639	501	433	472	446	491	
2															267	355	388	416	449	434	489	448	487	634	542	606	493	477	453	410		
3														340	308	375	393	428	432	457	457	438	460	615	529	561	192	458	444			
4													315	340	288	336	363	392	419	441	447	437	440	589	504	544	437	451				
5												226	3	2	4	7	8	27	27	42	40	6	3	15	4	81	85					
6																		1		1		1			1							
7																				1		1										
8									161	160	135	160	134	143	132	155	175	197	208	228	190	184	194	293								
9								124	138	147	120	140	111	130	120	149	160	119	180	205	158	161	143									
10							23	14	53	55	43	14	26	35	13	42	26	15	146	178	142	153										
11						2	2	4	6	7	4		1	1			5	2	21	43	24											
12									2	3	2			1			1		1	2												
13				95	86	52	72	91	83	97	78	93	89	92	102	100	128	123	110													
14			108	89	81	51	65	77	76	84	77	84	82	86	95	91	124	105														
15		87	97	81	76	43	45	54	61	58	72	79	77	76	89	89	112															
16	105	31	29	10	15	6	9	3	4	8	12	9	17	16	24	12																
17	79	69	79	71	65	44	57	61	68	69	61	65	58	62	69																	
18	78	66	78	69	64	43	56	60	65	66	60	63	58	64																		
19	78	63	77	68	62	43	56	60	64	59	60	62	56																			
20	74	63	75	66	62	42	54	55	62	56	56	61																				
21	69	58	64	61	56	39	51	49	53	50	52																					
22	50	18	29	22	15	10	15	12	15	22																						
23	12	5	9	4	6	6	10	7	7																							
24	9	2	7	2	5	5	8	6																								
25	49	43	40	43	35	30	27																									
26	46	38	36	41	32	26																										
27	36	34	35	40	28																											
28	28	33	31	32																												
29	22	26	26																													
30	16	21																														

Table LX. PROMOTION-ELIGIBLE DATA OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																4	10	5	13	3	9	3	7	6	3	3	4	7	3	4	10	
2																4	6	4	12	3	11	4	6	5	2	2	2	5	3	4		
3														1		4	9	4	11	5	10	3	6	4	2	2	2	5	3			
4													1	1		3	6	4	10	5	11	3	6	3	2	2	3	5				
5												1								1						1						
6																																
7																																
8									1	1	1			1		1	4	3	8	3	4	1	3	3								
9									1	1				1		1	4	3	7	2	4		2									
10										2							3	1	5	1	4											
11																	2	1	2	1	1											
12																																
13							1							1		1			3													
14							1							1		1																
15																1																
16																																
17							1			1																						
18							1			1																						
19							1			1																						
20							1			1																						
21							1			1																						
22																																
23																																
24																																
25							1																									
26																																
27																																
28																																
29																																
30																																

Table LXI. PROMOTION-ELIGIBLE DATA OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1	2	1		2		8	6	11	9	6	4	5	9	12	9	
2																	1	1			2	3	5	10	5	7	8	5	8	9		
3																	2	2	1		2	4	5	10	5	6	6	4	7			
4													1	2			1				2	4	5	7	4	5	8	4				
5												2														1	4					
6																																
7																																
8									1	1		2		1			1						4	2								
9										1		1		1			1						2									
10										1																						
11												1																				
12												1																				
13							1			1		1					1															
14							1			1		1					1															
15							1			1		1					1															
16																																
17							1			1		1																				
18							1			1		1																				
19							1			1		1																				
20							1					1																				
21							1																									
22																																
23																																
24																																
25							1																									
26		1																														
27		1																														
28		1																														
29		1																														
30		1																														

APPENDIX E - PROMOTION DATA

Table LXII. PROMOTION DATA OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																129	114	119														
2															1049	1135	1013	1076	1024	1161	1230	1103	1250	1016	952	1405	513	1303	1153	932		
3															54	66	74	57	1		2	1	4	2	2		681	2	2			
4													791	638	607	730	701	805	714	735	639	689	795	639	631	773	728	789				
5												335	3	5	8	10	4	43	60	53	72	9	12	19	13	82	37					
6													1				1					1			1	1						
7																1																
8													35	2					2			1	5									
9								205	131	193	157	214	200	227	214	167	194	133	36	13	6	14	2									
10								80	128	121	104	58	84	19	38	113	96	179	214	227	257	203										
11									2			4	1		3		1	4	3	30	15											
12											1						1															
13								1		3						1	3	3	1													
14				1	21	37	64	28	38	62	6		6	15	3	1	10	2														
15		165	193	173	171	120	143	156	130	146	162	153	179	146	105	145	153															
16	215	68	82	16	26	33	4	2	2		1	4	1	1	40	16																
17			6	1					1			1			7																	
18			2							1																						
19		2									3		1																			
20			3			2	1	5		3	3	2																				
21	41	72	59	41	54	66	94	59	47	45	31																					
22	59	61	68	37	46	15	2	17	18	44																						
23					2																											
24																																
25																																
26		1				2																										
27	4	1	3	5	4																											
28	2	3	6	3																												
29	2	3	2																													
30		1																														

Table LXIII. PROMOTION DATA OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3	4	9														
2															29	45	44	84	69	63	62	66	62	69	69	111	51	88	89	76		
3														2	2	3	3															
4													28	18	13	30	36	63	48	32	34	32	37	44	54	54	51	50				
5																1		1	3	1	2		2	2		10	3					
6																																
7																																
8													1																			
9									1	2	4	5	7	6	5	10	8	7	1	2		1										
10										2	2		5	1	4	7	8	13	19	15	9	14										
11																				2	1											
12																																
13																		1	1													
14							3					1				1	2															
15			3	2	3		2			2	4	2	7	1	2	8	3															
16					1	1									4																	
17															1																	
18																																
19																																
20											1																					
21	1		1	2	1		2			1	1																					
22			2		1																											
23																																
24																																
25																																
26																																
27																																
28																																
29			1																													
30																																

Table LXIV. PROMOTION DATA OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																2	1															
2															4	3	2	12	5	3	21	23	20	42	53	56	28	51	52	66		
3																	1										28					
4													2	4	4	2	2	9	3	2	12	19	15	20	36	35	23	26				
5																	1	1					1		1	4	3					
6																																
7																																
8																																
9								2	1				1	2	2		1	3		1		2										
10									2	1						1		1			3	3										
11																																
12																																
13																																
14									1																							
15				1	1		1	1	1					1	1		1															
16																																
17																																
18																																
19																																
20																																
21							1		1																							
22				1																												
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXV. PROMOTION DATA OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																134	121	131														
2															1096	1193	1071	1182	1105	1230	1324	1215	1345	1152	1106	1617	615	1471	1316	1114		
3															56	69	78	61		1												
4													831	666	631	769	743	869	759	768	688	754	852	714	743	883	823	872				
5												337	3	5	9	11	4	42	63	53	74	9	15	21	14	99	42					
6													1				2					1			1	1						
7																																
8													35	2					2				5									
9								207	133	197	162	221	210	236	221	177	201	138	37	16	6	16	2									
10								80	131	125	108	59	88	20	42	122	105	188	230	242	267	221										
11									12		1	4	1		3		1	4	3	32	16											
12																																
13								1		3						1	3	4	2													
14				1	21	37	67	28	39	63	6	1	6	15	3	2	12	2														
15		165	196	177	175	119	147	157	136	149	167	155	187	149	108	151	158															
16	218	68	82	16	27	27	4	2	2		1	4	1	1	43	16																
17			6	1					1			1			8																	
18																																
19		2									3																					
20			3			2	1	5		4	4	2																				
21	42	72	60	44	55	66	97	59	48	47	32																					
22	59	61	70	38	47	15	2	17	18	44																						
23					2																											
24																																
25																																
26																																
27	5	1	3	5	4																											
28	2	3	6	3																												
29	2	3	3																													
30		1																														

Table LXVI. PROMOTION DATA OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																			14	23	19	20	17	17	18	17	8	18	29	39		
2																	3															
3													1			1	1	18	18	20	13	17	14	14	11	13	16	15				
4																		4	2	1							2					
5																																
6																																
7													1				3					1										
8														1	4	1		6				1										
9																		6	6	8	5	7										
10																																
11																																
12																																
13																																
14															2	2																
15																																
16																																
17																																
18																																
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXVII. PROMOTION DATA OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																14	12	38			1							1				
2															246	251	151	262	285	352	437	286	322	287	228	222	97	163	162	168		
3															3	10	5	7	1													
4													92	173	145	183	56	169	198	249	322	248	254	215	162	144	138	117				
5												16		4	1	3	19	46	26	51	57		3	8	5	20	14					
6																		1							2							
7																																
8									1			2	16										1									
9								5	16	30	40	31	17	86	54	73	26	41	21	14	2	1	1									
10								5		8	6	5	8	2	21	12	8	51	78	73	127	87										
11									3	1	1			1	2			1		18	9											
12																																
13							1											1														
14					5	9	3	4	7	12		2	1		2	1	3	2														
15		5	2	8	4	7	5	12	10	15	30	19	21	50	36	45	16															
16	6	4	5		2	1	2			1		3		1	17	4																
17																																
18																																
19								1			1																					
20								2		1	2																					
21	3	2	3	2	2	3	2	2	3	4	7																					
22	1	4	1	2	2			1		1																						
23																																
24																																
25																																
26		1																														
27																																
28				1																												
29																																
30																																

Table LXVIII. PROMOTION DATA OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																		4														
2															10	11	11	29	21	22	21	34	30	32	34	42	13	14	13	20		
3																																
4													2	11	8	7	5	21	17	11	15	33	27	20	25	30	17	11				
5																	1	4	2	5	4			2	1	1						
6																																
7																																
8																																
9								1			1	2	3	7	2	6	2	9	1	2												
10														1	2		1	4	4	2	7	13										
11																					1											
12																																
13																																
14						1	1	1																								
15											1	1	1	4		3	2															
16															1																	
17																																
18																																
19								1																								
20																																
21											1																					
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXIX. PROMOTION DATA OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																																
2																4	2	4	1	3	4	6	8	7	5	14	8	4		9		
3																																
4													1	1	1	2	1	2	1		3	3	6	5	3	12	8	3				
5																					1											
6																																
7																																
8																																
9														1	1	1		2														
10																					1	1										
11																																
12																																
13																																
14																																
15															1																	
16																																
17																																
18																																
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXX. PROMOTION DATA OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																9	10	22			1							1				
2															82	77	79	69	71	102	84	38	53	63	69	70	23	61	50	58		
3															3	6	4	7														
4													49	35	35	53	25	65	73	80	83	47	45	49	32	34	44	41				
5															1	1	1	2	5	9	5		1	2	2	4	3					
6																		1	1													
7																																
8																																
9								1	1		1		3	2	2	3	2	1														
10										1		3				3					4	5										
11											1									1												
12																																
13							1																									
14							1	1	2	1								1														
15				2	3	5	1	4	2	1	1	1		1	1		3															
16			1		1	1	1	1						1		2																
17																																
18																																
19																																
20																																
21			1	1			1		1																							
22					1																											
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXXI. PROMOTION DATA OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																5	2	21										1				
2															181	191	88	229	241	279	386	299	316	271	204	214	100	126	133	148		
3																4	1															
4													46	152	124	140	39	127	150	185	265	245	251	200	163	154	125	95				
5														4	2	19	50	24	48	58			2	8	4	18	13					
6																									2							
7																																
8									1			2	16										1									
9								10	15	30	40	33	17	93	56	78	28	51	22	16	2	1	1									
10								5		7	6	2	8	3	23	9	9	55	84	75	135	97										
11									3	1				1	2			1		18	10											
12																																
13																		1														
14					5	10	3	3	5	11		2	1		2	1	3	1														
15		5	2	6	1	2	4	9	8	14	31	19	22	54	36	48	17															
16	9	4	4		1		1			1		3			18	2																
17																																
18																																
19								1			1																					
20								2		1	2																					
21	3	2	2	1	2	3	1	2	2	4	8																					
22	1	4	1	2	1			2		1																						
23																																
24																																
25																																
26		1																														
27																																
28				1																												
29																																
30																																

Table LXXII. PROMOTION DATA OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																244	119	210			1								1		1	
2															1432	1014	988	1106	1111	1204	1121	1588	1343	1247	1058	1596	798	1536	1175	1358		
3															147	167	87	146											1			
4													1395	1151	1124	987	956	1085	1030	1135	998	1351	1223	1110	965	1432	1511	1417				
5												304	8	16	55	18	23	63	69	53	68	128	90	88	56	114	112					
6																	2								2	3						
7																																
8										1			54	4	3				1			1	2									
9								374	292	435	415	365	347	487	632	408	434	276	58	40	7	19										
10							117	174	232	227	159	72	83	8	57	161	127	289	384	351	408	329										
11									32	4	11	4	3	1	2		7	3	1	57	28											
12								3	1	3	4	1		1						3												
13										4						2	5	12	1													
14				1	27	39	110	80	108	145	11	8	9	15	11	9	23	4														
15		135	187	180	206	175	220	298	241	323	354	269	278	291	304	266	242															
16	173	45	47	22	38	18	5		1	10	4	16	1	3	55	14																
17			1			2	1	1			5		1		4																	
18	1		2		2		1	1		1				1																		
19							4	1			3																					
20			1			2	4	2		14	8	2																				
21	58	63	54	53	75	67	116	125	92	97	69																					
22	40	42	51	35	38	18		27	15	41																						
23					2																											
24				1																												
25																																
26			1																													
27		1		1	6																											
28	3	7	5	2																												
29	3	2	2																													
30	4																															

Table LXXIII. PROMOTION DATA OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																3	1	3														
2															18	14	21	23	20	16	23	36	27	24	34	20	21	33	44	39		
3															6	1	1	1														
4													10	42	12	15	20	20	19	17	20	30	26	18	26	18	24	28				
5												1	1					3		1	2	1		4	2		4					
6																																
7																																
8														2																		
9								3	1	1	1	2	1	12	9	8	13	5	1	1	1	1										
10								2				2	1			2	1	2	7	8	10	8										
11																																
12																																
13																		1	1													
14								3						4	1																	
15		1			1	1	1	1	1	1			3	3	4	7	4															
16																																
17																																
18																																
19																																
20																																
21		1			2		1	1																								
22										1																						
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXXIV. PROMOTION DATA OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1		3														
2															7	3	1	6	1	6	10	24	10	42	30	33	28	52	44	57		
3															1	1		1														
4													6	5	5	3	1	7	1	4	10	22	9	30	25	25	40	45				
5														1	1							1	2	9	1	5	5					
6																										1						
7																																
8																																
9								4		2	1	1	2	3	3	2	1	3				2										
10																	1	1		4	4	8										
11																																
12																																
13																																
14							2	3																								
15		1		2	1							1		1	4	1	1															
16						1			1																							
17																																
18																																
19																																
20																																
21		1		1	1			1																								
22									1																							
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXXV. PROMOTION DATA OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																253	121	215			1								1		2	
2															1469	1031	1011	1132	1128	1218	1147	1651	1377	1317	1123	1631	846	1618	1243	1456		
3															155	173	89	148											1			
4													1420	1201	1150	1005	981	1106	1042	1148	1019	1404	1254	1164	1018	1458	1571	1487				
5												307	9	16	57	18	21	67	66	55	71	131	93	100	59	117	119					
6																	2								2	5						
7																																
8										1			54	7	3				1			1	2									
9								385	293	441	417	371	352	499	651	419	448	284	59	42	8	21										
10							118	176	233	228	161	74	84	8	58	164	130	292	385	361	415	341										
11									32	4	11	4	3	1	2		7	3	1	57	28											
12								3	1	3	4	1		1						3												
13										4						1	5	13	2													
14				1	27	39	114	86	108	147	11	8	9	19	12	9	23	4														
15		138	187	188	208	177	225	302	244	325	355	272	282	293	315	274	248															
16	174	46	47	23	39	19	5		1	10	4	16	1	3	56	14																
17			1			2	1	1			5		1		4																	
18	1		2		2			1		1																						
19							4	1			3																					
20			1			2	4	2		14	8	2																				
21	58	66	54	57	78	68	118	129	93	97	69																					
22	40	43	51	35	38	18		27	15	42																						
23					2																											
24				1																												
25																																
26			1																													
27		1		1	6																											
28	3	7	5	2																												
29	3	2	2																													
30	4																															

Table LXXVI. PROMOTION DATA OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																		1														
2																5	3	8	10	17	19	17	25	18	23	45	14	38	37	46		
3																																
4														6		5	2	9	14	19	19	17	24	15	20	43	34	33				
5														1			2	1	3					2		3	3					
6																																
7																																
8																																
9											1			5		2	2	1	1			1										
10																		1	9	6	9	11										
11																																
12																																
13																1																
14																																
15														3		1																
16																																
17																																
18																																
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXXVII. PROMOTION DATA OF WHITE SUBMARINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																28	23	33													1	
2																346	371	398	431	456	456	438	460	615	529	561	192	458	444	394		
3															17	18	20	22										1				
4													270	314	271	287	296	323	333	363	336	341	360	465	407	356	324	354				
5												139		1	4	3	1	14	11	23	14	1	2	12		41	54					
6																		1							1							
7																						1										
8													7	1					1			1	2									
9								86	79	88	72	119	82	82	103	108	136	58	17	17	10	9										
10							11	7	41	41	30	9	24	31	11	26	20	88	109	125	107	113										
11										1	1		1					2		22	11											
12																																
13											1			1				3														
14					2	5	15	13	13	19	1	2	1	4	2		9	5														
15		57	71	70	60	37	42	45	56	50	53	61	55	58	63	73	85															
16	78	13	8	1	4					1	4	3			6	2																
17																																
18																																
19																																
20	1					2	1	2		1	1	1																				
21	15	34	29	32	34	28	30	31	34	23	16																					
22	35	16	15	15	6	3		2	7	11																						
23																																
24																																
25																																
26																																
27	2		1																													
28	2	2	2	3																												
29	1	1	2																													
30																																

Table LXXVIII. PROMOTION DATA OF BLACK SUBMARINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOE	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																	3															
2																4	6	4	11	5	10	3	6	4	2	2	2	5	3	4		
3																	2															
4														1		3	6	5	9	4	8	2	5	3	2	1	3	4				
5												1														1						
6																																
7																																
8																																
9									1				1			1	1		1													
10										2									2		3											
11																					1											
12																																
13																			1													
14							1																									
15													1																			
16																																
17																																
18																																
19																																
20																																
21							1			1																						
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXXIX. PROMOTION DATA OF HISPANIC SUBMARINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																	1															
2																	1	1			2	4	5	10	5	6	6	4	7	8		
3																	1															
4													1	2			1				2	3	5	4	4	2	3	2				
5												2														1	2					
6																																
7																																
8																																
9												1		1			1															
10										1																						
11																																
12																																
13																																
14																																
15							1			1		1					1															
16																																
17																																
18																																
19																																
20																																
21							1																									
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

APPENDIX F - LOSS RATES

Table LXXX LOSS RATES OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	19901991
1															0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2														0.007	0.050	0.000	0.000	0.000	0.027	0.000	0.022	0.000	0.000	0.000	0.003	0.000	0.028	0.000	0.003	
3													0.228	0.183	0.118	0.079	0.076	0.060	0.080	0.117	0.108	0.121	0.121	0.115	0.097	0.107	0.072	0.058		
4												0.214	0.247	0.201	0.235	0.221	0.163	0.175	0.232	0.317	0.291	0.264	0.244	0.220	0.284	0.277	0.293			
5											0.261	0.268	0.327	0.291	0.276	0.230	0.217	0.220	0.222	0.203	0.178	0.169	0.173	0.234	0.239	0.274				
6										0.224	0.213	0.233	0.206	0.237	0.228	0.259	0.196	0.196	0.182	0.162	0.176	0.156	0.166	0.192	0.194					
7									0.166	0.163	0.126	0.156	0.179	0.147	0.180	0.143	0.171	0.182	0.194	0.165	0.132	0.105	0.170	0.174						
8								0.136	0.123	0.142	0.125	0.101	0.064	0.082	0.075	0.091	0.100	0.146	0.108	0.099	0.111	0.121	0.123							
9							0.171	0.024	0.008	0.052	0.078	0.051	0.047	0.062	0.056	0.061	0.097	0.077	0.098	0.045	0.041	0.089								
10						0.000	0.155	0.133	0.120	0.113	0.101	0.015	0.030	0.095	0.178	0.104	0.100	0.084	0.079	0.064	0.071									
11					0.062	0.043	0.083	0.112	0.096	0.102	0.090	0.096	0.035	0.028	0.076	0.083	0.151	0.152	0.114	0.191										
12				0.025	0.039	0.056	0.093	0.063	0.021	0.033	0.049	0.017	0.044	0.046	0.027	0.047	0.047	0.060	0.075											
13			0.060	0.052	0.044	0.080	0.044	0.113	0.045	0.042	0.048	0.044	0.029	0.030	0.024	0.023	0.046	0.025												
14		0.021	0.018	0.024	0.000	0.035	0.058	0.038	0.055	0.039	0.023	0.035	0.026	0.013	0.025	0.050	0.040													
15	0.000	0.012	0.032	0.000	0.021	0.000	0.012	0.000	0.000	0.027	0.009	0.037	0.000	0.000	0.034	0.033														
160.000	0.005	0.017	0.011	0.007	0.009	0.008	0.000	0.010	0.019	0.042	0.000	0.034	0.040	0.018	0.044															
170.033	0.033	0.019	0.038	0.000	0.017	0.034	0.024	0.035	0.024	0.000	0.009	0.032	0.014	0.023																
180.037	0.031	0.020	0.106	0.038	0.031	0.017	0.042	0.036	0.065	0.025	0.033	0.073	0.056																	
190.083	0.102	0.073	0.088	0.071	0.099	0.040	0.122	0.091	0.047	0.050	0.044	0.057																		
200.303	0.317	0.275	0.327	0.263	0.215	0.244	0.287	0.294	0.271	0.323	0.342																			
210.185	0.142	0.219	0.179	0.187	0.172	0.098	0.104	0.092	0.155	0.109																				
220.098	0.072	0.129	0.113	0.134	0.115	0.135	0.116	0.101	0.081																					
230.061	0.107	0.060	0.088	0.081	0.078	0.078	0.018	0.163																						
240.130	0.113	0.134	0.097	0.112	0.123	0.119	0.161																							
250.100	0.150	0.148	0.119	0.099	0.097	0.115																								
260.389	0.186	0.220	0.270	0.230	0.393																									
270.121	0.130	0.152	0.074	0.338																										
280.190	0.150	0.095	0.320																											
290.298	0.176	0.408																												
300.545	0.732																													

Table LXXXI LOSS RATES OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.000	0.111	0.078	0.000	0.000	0.030	0.000	0.130	0.085	0.000	0.026	0.000	0.000	0.051	0.000	0.000	
2															0.000	0.000	0.089	0.021	0.000	0.000	0.015	0.043	0.000	0.053	0.080	0.018	0.010	0.043	0.022	0.000		
3														0.147	0.241	0.163	0.098	0.087	0.043	0.095	0.156	0.182	0.097	0.169	0.072	0.189	0.104	0.114	0.132			
4													0.000	0.345	0.318	0.146	0.087	0.190	0.182	0.386	0.241	0.407	0.304	0.169	0.141	0.233	0.326	0.231				
5												0.308	0.241	0.211	0.133	0.171	0.167	0.147	0.148	0.086	0.293	0.188	0.128	0.102	0.145	0.246	0.172					
6											0.000	0.222	0.227	0.200	0.231	0.138	0.143	0.207	0.217	0.156	0.000	0.154	0.176	0.114	0.191	0.154						
7										0.111	0.000	0.000	0.059	0.167	0.000	0.120	0.100	0.196	0.056	0.148	0.167	0.000	0.107	0.077	0.079							
8									0.000	0.125	0.300	0.143	0.063	0.000	0.200	0.091	0.111	0.081	0.176	0.130	0.240	0.091	0.200	0.194								
9									0.000	0.286	0.143	0.000	0.133	0.000	0.000	0.000	0.000	0.088	0.071	0.050	0.105	0.100	0.050									
10							0.000		0.000	0.200	0.000	0.333	0.000	0.400	0.000	0.238	0.208	0.129	0.077	0.000	0.118	0.000										
11						0.000	0.000		0.000	0.000	0.000	0.000	0.077	0.167	0.000	0.125	0.158	0.222	0.208	0.053	0.267											
12					0.250	0.000	0.000		0.000	0.000	0.000	0.000	0.167	0.200	0.000	0.000	0.063	0.000	0.000	0.056												
13				0.000	0.000	0.500	0.000		0.000	0.000	0.167	0.000	0.000	0.000	0.000	0.000	0.133	0.048	0.053													
14			0.000	0.333	0.000	0.000	0.167		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000														
15		0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.071	0.000															
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000		1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.077																
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000			0.000	0.000	0.000	0.000	0.200	0.111																	
18	0.000	1.000	0.000	0.000	0.000	0.000	0.000			0.000	0.000	0.000	0.100	0.250																		
19	0.333		0.000	0.000	0.000	0.000	0.000			0.250	0.000	0.333	0.111																			
20	0.000		0.250	0.000	0.200	0.000	0.000			0.000	0.333	0.000																				
21	0.000		0.000	0.000	0.250	0.000	0.000			0.667	0.250																					
22	0.500		0.000	0.000	0.000	0.000	0.000			0.000																						
23	0.000		0.000	0.000	0.333	1.000	0.200																									
24	0.000		0.000	0.500	0.000		0.250																									
25	0.000		0.000	0.000	0.000		0.000																									
26	0.000		0.000	0.000	0.000																											
27	0.000		0.333	1.000	0.000																											
28	0.000		0.000																													
29	0.000		0.000																													
30																																

Table LXXXII LOSS RATES OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.000	0.250	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.079	0.000	0.000	0.000	0.000	0.000	
2															0.000	0.400	0.000	0.000	0.000	0.000	0.000	0.042	0.000	0.045	0.019	0.034	0.000	0.000	0.000	0.000		
3														0.250	0.000	0.000	0.000	0.000	0.200	0.000	0.238	0.043	0.048	0.262	0.075	0.036	0.140	0.176	0.192			
4													0.333	0.333	0.000	0.333	0.000	0.077	0.250	0.500	0.188	0.136	0.200	0.290	0.224	0.148	0.347	0.333				
5												0.000	0.000	0.000	0.250	0.000	0.000	0.167	0.000	0.000	0.231	0.316	0.250	0.227	0.184	0.326	0.313					
6											0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.200	0.333	0.000	0.200	0.385	0.083	0.059	0.226	0.258						
7										0.000	0.500	0.000	0.500	0.000	0.333	0.000	0.500	0.000	0.000	0.000	0.250	0.125	0.091	0.063	0.083							
8									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.000	0.000	0.167	0.000	0.300	0.067								
9								0.333	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.143	0.000									
10								0.000	0.000	0.000	1.000		0.000	0.000	0.000	0.500	0.000	0.000	1.000	0.000	0.000	0.000										
11							0.000	0.000	0.000	0.000			0.000	0.000	0.000	1.000	0.000	0.286		0.500	0.400											
12					0.000		0.000	0.000	0.000	0.000			0.000	0.000	0.000		0.000	0.400		0.000												
13				0.000	0.000		0.000	0.000	0.000	0.000			0.000	0.500	0.000		0.000	0.000														
14				0.000	0.000		0.000	0.000	0.000	0.000			0.000	0.000	0.000		0.000	0.000														
15				0.000	0.000		0.000	0.500	0.000	0.000			0.000	0.000	0.000		0.000															
16	0.000			0.000	0.000		0.000	0.000	0.000	0.000			0.000	0.000	0.000																	
17	0.000			0.000	0.000		0.000	0.000	0.000	0.000			0.000	0.000	0.000																	
18	0.000			0.000	0.000		0.000	1.000	0.333	0.000			0.000	0.000																		
19	0.500			0.000	0.500		0.000		0.000	0.000			0.000																			
20	0.000			0.000	1.000		0.000		0.500	1.000																						
21	1.000			0.000			0.000		0.000																							
22				0.000			0.000		0.000																							
23				0.000			0.000		0.000																							
24				0.000			0.000																									
25				0.000			0.000																									
26				0.000																												
27				0.000																												
28																																
29																																
30																																

Table LXXXIII LOSS RATES OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
2															0.003	0.050	0.003	0.000	0.000	0.027	0.000	0.029	0.000	0.000	0.005	0.005	0.000	0.029	0.000	0.000		
3														0.226	0.185	0.117	0.080	0.085	0.067	0.079	0.122	0.108	0.119	0.131	0.111	0.103	0.115	0.082	0.068			
4													0.207	0.252	0.204	0.233	0.219	0.174	0.177	0.245	0.313	0.296	0.268	0.247	0.213	0.277	0.288	0.293				
5												0.260	0.267	0.325	0.287	0.273	0.230	0.215	0.217	0.218	0.212	0.183	0.170	0.165	0.224	0.245	0.264					
6											0.221	0.213	0.237	0.209	0.237	0.226	0.256	0.202	0.201	0.182	0.153	0.180	0.153	0.157	0.196	0.190						
7										0.165	0.162	0.125	0.151	0.177	0.154	0.176	0.141	0.174	0.165	0.184	0.164	0.120	0.107	0.160	0.165							
8									0.132	0.120	0.145	0.124	0.104	0.061	0.088	0.080	0.090	0.100	0.148	0.106	0.109	0.110	0.127	0.126								
9								0.174	0.023	0.013	0.053	0.076	0.054	0.045	0.056	0.047	0.057	0.091	0.079	0.097	0.048	0.045	0.085									
10							0.000	0.154	0.129	0.122	0.113	0.108	0.014	0.039	0.088	0.183	0.110	0.103	0.091	0.077	0.066	0.068										
11						0.061	0.039	0.085	0.110	0.094	0.099	0.088	0.095	0.041	0.019	0.081	0.087	0.157	0.160	0.116	0.203											
12					0.028	0.038	0.055	0.093	0.062	0.027	0.035	0.052	0.022	0.043	0.043	0.030	0.051	0.051	0.056	0.074												
13				0.059	0.051	0.048	0.078	0.044	0.107	0.038	0.037	0.051	0.042	0.033	0.029	0.027	0.025	0.047	0.028													
14			0.020	0.021	0.020	0.000	0.038	0.057	0.041	0.057	0.038	0.022	0.034	0.025	0.013	0.023	0.048	0.035														
15		0.000	0.009	0.032	0.000	0.016	0.000	0.016	0.000	0.000	0.031	0.014	0.035	0.000	0.000	0.036	0.031															
160	0.000	0.005	0.016	0.011	0.007	0.013	0.004	0.000	0.014	0.019	0.036	0.000	0.033	0.034	0.017	0.046																
170	0.032	0.033	0.019	0.033	0.000	0.021	0.037	0.024	0.034	0.023	0.000	0.009	0.030	0.018	0.026																	
180	0.036	0.034	0.019	0.108	0.036	0.030	0.017	0.046	0.040	0.063	0.023	0.033	0.078	0.059																		
190	0.088	0.102	0.072	0.086	0.072	0.098	0.043	0.122	0.089	0.050	0.048	0.048	0.059																			
200	0.299	0.317	0.275	0.321	0.266	0.218	0.238	0.287	0.295	0.269	0.323	0.338																				
210	0.186	0.142	0.217	0.174	0.186	0.171	0.088	0.104	0.090	0.169	0.112																					
220	0.102	0.072	0.127	0.109	0.136	0.115	0.129	0.116	0.090	0.072																						
230	0.060	0.107	0.059	0.085	0.093	0.086	0.081	0.018	0.168																							
240	0.129	0.113	0.131	0.103	0.110	0.123	0.121	0.161																								
250	0.107	0.150	0.145	0.115	0.097	0.097	0.119																									
260	0.385	0.186	0.215	0.260	0.225	0.393																										
270	0.119	0.130	0.157	0.088	0.329																											
280	0.186	0.150	0.093	0.327																												
290	0.292	0.176	0.397																													
300	0.529	0.714																														

Table LXXXIV LOSS RATES OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1.000	1.000			0.000	0.056	0.000	0.000	0.056	0.000	0.053	0.000	0.000	0.000	0.000	0.000	
2																0.000	0.000		0.000	0.000	0.000	0.000	0.105	0.000	0.000	0.056	0.000	0.000	0.033	0.071		
3																0.000	0.000	0.000	0.000	0.130	0.053	0.000	0.059	0.000	0.056	0.000	0.000	0.000	0.069			
4													0.000			0.000	0.000	0.000	0.000	0.000	0.278	0.150	0.125	0.118	0.353	0.235	0.174	0.167				
5												0.000	0.000			0.000	0.000	0.087	0.158	0.143	0.154	0.059	0.143	0.267	0.364	0.154	0.211					
6												1.000	0.000		0.000	0.000	0.250	0.000	0.125	0.056	0.364	0.125	0.167	0.364	0.429	0.273						
7													0.000	0.000	0.000	0.000	0.333	0.143	0.429	0.235	0.143	0.286	0.100	0.286	0.250							
8									1.000				0.000	0.000	0.000	0.000	0.000	0.111	0.375	0.154	0.000	0.100	0.222	0.000								
9													0.000	0.000	0.000	0.400	0.500	0.188	0.200	0.273	0.167	0.111	0.000									
10													0.000	0.000	0.200	0.333	0.000	0.000	0.000	0.000	0.000	0.000										
11							0.000				0.000		0.000	0.000	0.500	0.000	0.000	0.154	0.000	0.000	0.000											
12							1.000				0.000		0.000	1.000	0.000	0.000	0.500	0.000	0.000	0.000												
13										1.000	1.000		0.000		0.000	0.000	0.000	0.000	0.000													
14													0.000		0.000	0.000	0.000	0.000														
15													0.000		0.000	0.000	1.000															
16													0.000		0.000	0.000																
17													0.000		0.000																	
18													0.000																			
19													0.000																			
20							0.000																									
21							1.000																									
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table LXXXV LOSS RATES OF WHITE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.172	0.187	0.000	0.000	0.000	0.000	0.013	0.041	0.102	0.013	0.009	0.000	0.000	0.000	0.018	0.000	
2															0.368	0.033	0.000	0.032	0.044	0.000	0.036	0.043	0.000	0.043	0.000	0.018	0.000	0.016	0.047	0.000		
3														0.526	0.045	0.000	0.030	0.072	0.000	0.059	0.031	0.034	0.000	0.000	0.000	0.000	0.000	0.071	0.030			
4													0.609	0.313	0.258	0.218	0.338	0.149	0.208	0.131	0.102	0.106	0.189	0.178	0.116	0.185	0.201	0.235				
5												0.479	0.342	0.343	0.343	0.372	0.396	0.183	0.192	0.150	0.195	0.139	0.240	0.290	0.327	0.309	0.349					
6											0.304	0.438	0.208	0.123	0.148	0.107	0.094	0.143	0.165	0.162	0.164	0.134	0.142	0.109	0.109	0.164						
7										0.222	0.175	0.302	0.131	0.061	0.000	0.064	0.138	0.131	0.056	0.119	0.143	0.043	0.074	0.155	0.033							
8									0.233	0.082	0.061	0.000	0.038	0.000	0.071	0.009	0.020	0.062	0.078	0.100	0.057	0.067	0.115	0.069								
9								0.389	0.152	0.000	0.097	0.106	0.039	0.082	0.044	0.034	0.041	0.029	0.071	0.117	0.037	0.048	0.058									
10							0.200	0.000	0.179	0.000	0.018	0.024	0.061	0.089	0.034	0.223	0.234	0.180	0.076	0.101	0.058	0.081										
11						0.115	0.350	0.037	0.000	0.085	0.000	0.073	0.022	0.043	0.071	0.046	0.028	0.147	0.240	0.182	0.297											
12					0.059	0.000	0.000	0.000	0.000	0.233	0.085	0.079	0.044	0.011	0.000	0.024	0.029	0.054	0.043	0.179												
13				0.211	0.250	0.120	0.000	0.192	0.000	0.030	0.019	0.000	0.000	0.057	0.038	0.049	0.059	0.000	0.057													
14			0.273	0.200	0.000	0.091	0.143	0.000	0.000	0.000	0.019	0.057	0.000	0.000	0.053	0.039	0.031	0.000														
15		0.125	0.000	0.000	0.000	0.000	0.083	0.000	0.185	0.000	0.038	0.061	0.045	0.000	0.000	0.027	0.065															
160.133		0.000	0.111	0.000	0.000	0.077	0.000	0.000	0.136	0.000	0.000	0.065	0.024	0.036	0.000	0.014																
170.077		0.214	0.000	0.083	0.000	0.000	0.000	0.000	0.000	0.029	0.020	0.138	0.000	0.000	0.014																	
180.000		0.000	0.000	0.000	0.154	0.074	0.267	0.111	0.053	0.059	0.020	0.000	0.000	0.024																		
190.000		0.000	0.000	0.091	0.182	0.200	0.273	0.083	0.000	0.063	0.082	0.040	0.220																			
200.500		0.500	0.083	0.300	0.167	0.300	0.375	0.227	0.316	0.533	0.400	0.375																				
210.000		0.000	0.182	0.000	0.467	0.286	0.000	0.294	0.231	0.429	0.222																					
220.143		0.000	0.444	0.286	0.125	0.000	0.200	0.000	0.000	0.000																						
230.500		0.111	0.000	0.000	0.286	0.000	0.250	0.000	0.200																							
240.667		0.000	0.167	0.000	0.000	0.417	0.333	0.167																								
251.000		0.125	0.000	0.000	0.200	0.000	0.000																									
26		0.429	0.200	0.200	0.250	0.625																										
27		0.000	0.000	0.250	0.333																											
28		0.500	0.250	0.000																												
29		0.000																														
30		1.000																														

Table LXXXVI LOSS RATES OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.086	0.024	0.000	0.000	0.000	0.000	0.000	
2															0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.000	0.000	0.000	0.043	0.000	0.000	0.000		
3														0.636	0.000	0.000	0.000	0.000	0.045	0.182	0.000	0.000	0.097	0.000	0.143	0.000	0.000	0.000	0.000			
4													0.867	0.083	0.100	0.231	0.273	0.121	0.143	0.111	0.048	0.000	0.000	0.273	0.033	0.200	0.217	0.200				
5												0.000	0.000	0.273	0.111	0.000	0.125	0.207	0.000	0.000	0.050	0.147	0.107	0.083	0.138	0.222	0.167					
6											0.500	0.200	0.333	0.000	0.125	0.100	0.143	0.000	0.143	0.250	0.000	0.069	0.080	0.091	0.040	0.000						
7											0.000	0.000	0.000	0.000	0.143	0.222	0.000	0.087	0.000	0.167	0.105	0.074	0.043	0.100	0.042							
8											0.000	0.500	0.000	0.000	0.167	0.143	0.000	0.048	0.111	0.300	0.059	0.120	0.136	0.000								
9								0.000			0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.100	0.125	0.000	0.063	0.000	0.105									
10							0.000	0.000			0.000	0.000	0.000	0.111	0.000	0.143	0.429	0.056	0.214	0.000	0.067	0.000										
11						0.000	0.000	0.000			0.000	0.000	0.000	0.125	0.000	0.000	0.250	0.176	0.545	0.286	0.357											
12						0.000	0.000	0.000			0.000	0.333	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.200												
13						0.000	0.000	0.000			0.000	0.000	0.000	0.000	0.200	0.000	0.000	0.071	0.000													
14						0.000	0.000	0.000	0.000		0.000	0.000	0.250	0.167	0.000	0.000	0.250	0.077														
15						0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000															
16						1.000	0.000	0.000	1.000		0.000	0.000	0.500	0.000	0.000	0.000																
17							0.000	0.000			0.000	0.000	0.000	0.000	0.000																	
18					0.000		0.000	0.000			0.000	0.000	0.000	0.000																		
19					0.000		0.000	0.000			0.000	0.000	0.000																			
20					0.000		0.000	0.000			0.000	0.500																				
21					0.000		0.000	1.000			0.000																					
22					0.000		0.000																									
23					0.000		0.000																									
24					0.000		0.000																									
25					1.000		1.000																									
26																																
27																																
28																																
29																																
30																																

Table LXXXVII LOSS RATES OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	
2															0.333	0.000	0.000	0.200	0.500	0.250	0.200	0.143	0.000	0.000	0.000	0.067	0.000	0.000		0.100		
3														0.800	0.500	0.000	0.000	0.250	0.000	0.333	0.000	0.167	0.111	0.000	0.000	0.071	0.000	0.000				
4													0.500	0.000	0.000	0.250	0.500	0.333	0.000	1.000	0.000	0.400	0.125	0.000	0.000	0.077	0.273	0.000				
5													0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.250	0.000	0.000	0.286	0.500	0.000	0.000					
6													0.500	0.000	0.000	0.667	1.000	0.000	0.000		0.000	0.000	0.143	0.200	0.333	0.000						
7													0.000	0.000	0.000	0.000		0.000	0.000		0.333	0.000	0.167	0.500	0.000							
8													1.000	0.000	0.000	0.000		0.000	0.000		0.000	0.333	0.200	0.500								
9														0.000	0.000	0.000		0.000	0.000		0.000	0.000	0.000									
10														0.000	0.000	0.000		0.000	1.000		0.000	0.500										
11														0.000	0.000	1.000		0.000			0.500											
12														0.000	0.000			0.500														
13														0.000	0.000			0.000														
14														0.000	0.000			0.000														
15														0.000	0.000																	
16														0.000	0.000																	
17	0.000													0.000	0.000																	
18	0.000													0.000																		
19	0.000																															
20	0.000																															
21	1.000																															
22		0.000																														
23		0.000																														
24		1.000																														
25																																
26																																
27																																
28																																
29																																
30																																

Table LXXXVIII LOSS RATES OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.366	0.110	0.000	0.000	0.000	0.000	0.000	0.100	0.250	0.000	0.000	0.000	0.000	0.000	0.161	0.000	
2															0.624	0.011	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.089	0.000		
3														0.713	0.000	0.000	0.000	0.000	0.000	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.078			
4													0.679	0.526	0.350	0.298	0.419	0.100	0.184	0.131	0.020	0.000	0.267	0.115	0.124	0.327	0.277	0.290				
5												0.855	0.773	0.727	0.708	0.724	0.593	0.378	0.238	0.321	0.400	0.302	0.610	0.688	0.821	0.706	0.588					
6											0.650	0.591	0.588	0.333	0.316	0.167	0.273	0.250	0.328	0.375	0.333	0.270	0.367	0.292	0.143	0.150						
7										0.579	0.500	0.667	0.286	0.100	0.000	0.050	0.063	0.238	0.093	0.200	0.250	0.074	0.211	0.471	0.083							
8									0.429	0.500	0.286	0.000	0.000	0.000	0.214	0.053	0.000	0.094	0.205	0.333	0.000	0.120	0.200	0.000								
9								0.750	0.417	0.000	0.400	0.000	0.111	0.100	0.364	0.000	0.111	0.103	0.097	0.042	0.033	0.000	0.083									
10							0.889	0.000	0.571	0.000	0.000	0.000	0.125	0.667	0.571	0.750	0.688	0.692	0.286	0.174	0.069	0.043										
11						0.429	0.000	0.000	0.000	0.000	0.000	0.125	0.143	0.000	0.667	0.000	0.400	0.625	1.000	0.684	0.630											
12					0.250	0.000	0.000	0.000	0.000	0.625	0.333	0.286	0.167	0.000	0.000	0.000	0.000	0.333		0.500											
13				0.286	0.667	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000													
14			0.400	0.400	0.000	0.000	0.200	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.250	0.000	0.250	0.000													
15		0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000														
160.800		0.000	0.600	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.167	0.750	0.667	0.250	0.000	0.000															
170.000		1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.333																
180.000			0.000	0.000	0.091	0.000	0.375	0.182	0.000	0.500	0.000	0.000	0.000	0.000																	
190.000			0.333	0.200	0.200	0.316	0.000	0.000	0.000	0.000	0.200	0.000	0.000																		
200.000		0.500	0.000	0.500	0.250	0.385	0.200	0.222	0.000	0.000	0.250	1.000																			
210.000		1.000	0.000	0.000	0.667	0.375	0.250	0.286	0.000	1.000	0.667																				
220.333		0.000	0.500	0.500	0.500	0.000	0.333	0.000	0.250																						
230.500		0.333	0.000	0.000	1.000	0.000	0.000	0.200	0.333																						
240.000		0.500	0.333	0.000		0.667	0.500	0.250																							
251.000		0.000	0.000	0.000		0.000	0.000																								
26		0.000	0.000	0.000		0.333																									
27		0.000	0.000	0.000																											
28		1.000	0.500	0.000																											
29			1.000																												
30																															

Table LXXXIX LOSS RATES OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.010	0.227	0.040	0.035	0.061	0.000	0.019	0.009	0.041	0.028	0.017	0.000	0.000	0.000	0.000	0.000	
2															0.052	0.044	0.022	0.049	0.084	0.017	0.040	0.047	0.033	0.042	0.024	0.049	0.022	0.056	0.022	0.013		
3														0.265	0.155	0.077	0.078	0.115	0.076	0.059	0.041	0.066	0.066	0.041	0.088	0.065	0.023	0.059	0.030			
4													0.495	0.169	0.183	0.167	0.241	0.170	0.203	0.126	0.118	0.128	0.134	0.192	0.075	0.119	0.162	0.189				
5												0.000	0.000	0.197	0.136	0.133	0.159	0.097	0.141	0.064	0.122	0.110	0.116	0.119	0.098	0.124	0.207					
6											0.141	0.392	0.123	0.087	0.120	0.108	0.057	0.084	0.095	0.104	0.118	0.105	0.105	0.081	0.103	0.123						
7										0.068	0.104	0.220	0.088	0.052	0.021	0.078	0.120	0.092	0.042	0.101	0.122	0.041	0.064	0.124	0.029							
8									0.042	0.000	0.033	0.065	0.135	0.000	0.054	0.009	0.045	0.058	0.036	0.062	0.063	0.074	0.110	0.074								
9								0.200	0.000	0.048	0.069	0.116	0.022	0.071	0.000	0.047	0.024	0.023	0.076	0.120	0.038	0.052	0.065									
10							0.000	0.000	0.043	0.000	0.037	0.079	0.045	0.048	0.000	0.109	0.098	0.055	0.041	0.088	0.054	0.079										
11						0.000	0.350	0.083	0.091	0.100	0.000	0.029	0.000	0.051	0.045	0.067	0.000	0.124	0.154	0.127	0.251											
12					0.000	0.000	0.077	0.000	0.050	0.139	0.038	0.059	0.000	0.032	0.024	0.024	0.027	0.047	0.030	0.162												
13				0.167	0.154	0.190	0.083	0.227	0.053	0.000	0.020	0.031	0.024	0.055	0.061	0.049	0.056	0.020	0.052													
14			0.167	0.100	0.000	0.235	0.182	0.059	0.056	0.000	0.020	0.000	0.000	0.012	0.039	0.038	0.029	0.010														
15		0.000	0.200	0.000	0.000	0.000	0.111	0.000	0.000	0.000	0.021	0.065	0.024	0.000	0.000	0.027	0.061															
16	0.000	0.000	0.000	0.000	0.000	0.385	0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.023	0.000	0.014																
17	0.077	0.154	0.000	0.111	0.000	0.000	0.100	0.000	0.000	0.030	0.041	0.133	0.000	0.000	0.000																	
18	0.000	0.000	0.000	0.125	0.063	0.222	0.111	0.059	0.063	0.031	0.021	0.000	0.000	0.023																		
19	0.083	0.000	0.000	0.143	0.133	0.000	0.375	0.125	0.000	0.065	0.065	0.038	0.220																			
20	0.545	0.455	0.250	0.167	0.231	0.143	0.400	0.214	0.400	0.517	0.419	0.360																				
21	0.200	0.000	0.500	0.000	0.300	0.167	0.000	0.364	0.333	0.429	0.160																					
22	0.000	0.000	0.000	0.200	0.000	0.000	0.250	0.000	0.000	0.000																						
23	0.500	0.000	0.000	0.000	0.143	0.000	0.333	0.000	0.000																							
24	1.000	0.000	0.000	0.000	0.000	0.167	0.000	0.222																								
25		0.143	0.000	0.000	0.333	0.000	0.500																									
26		0.500	0.333	0.250	0.250	0.800																										
27		0.000	0.000	0.333	0.333																											
28		0.333	0.000	0.000																												
29		0.000	1.000																													
30		1.000																														

Table XC LOSS RATES OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.184	0.282	0.145	0.046	0.064	0.087	0.096	0.102	0.073	0.068	0.058	0.086	0.063	0.035	0.022	0.072	
2															0.034	0.027	0.052	0.024	0.046	0.024	0.046	0.051	0.076	0.086	0.033	0.042	0.056	0.014	0.030	0.080		
3														0.035	0.016	0.014	0.000	0.007	0.008	0.002	0.024	0.035	0.006	0.006	0.015	0.016	0.004	0.016	0.024			
4													0.105	0.072	0.045	0.048	0.030	0.007	0.000	0.005	0.023	0.031	0.004	0.022	0.017	0.005	0.013	0.043				
5												0.169	0.174	0.135	0.122	0.123	0.041	0.031	0.023	0.048	0.027	0.022	0.030	0.022	0.018	0.039	0.058					
6											0.164	0.214	0.252	0.274	0.172	0.154	0.120	0.098	0.089	0.138	0.113	0.142	0.111	0.066	0.075	0.103						
7										0.165	0.206	0.263	0.290	0.196	0.155	0.127	0.109	0.142	0.255	0.227	0.201	0.226	0.220	0.192	0.173							
8									0.103	0.142	0.209	0.219	0.118	0.036	0.065	0.090	0.151	0.189	0.184	0.184	0.154	0.199	0.259	0.234								
9								0.417	0.059	0.096	0.083	0.063	0.068	0.045	0.038	0.037	0.082	0.117	0.097	0.079	0.104	0.090	0.131									
10							0.057	0.235	0.160	0.164	0.103	0.084	0.000	0.038	0.081	0.174	0.087	0.105	0.061	0.066	0.028	0.042										
11						0.041	0.053	0.120	0.116	0.079	0.054	0.053	0.074	0.030	0.035	0.097	0.110	0.178	0.156	0.159	0.211											
12					0.032	0.036	0.028	0.040	0.061	0.005	0.034	0.059	0.034	0.029	0.070	0.060	0.088	0.053	0.086	0.058												
13				0.023	0.031	0.044	0.015	0.039	0.044	0.003	0.024	0.037	0.043	0.032	0.054	0.021	0.021	0.068	0.048													
14			0.036	0.050	0.032	0.003	0.029	0.018	0.031	0.015	0.009	0.023	0.035	0.035	0.029	0.017	0.066	0.027														
15		0.000	0.009	0.049	0.024	0.031	0.000	0.023	0.000	0.000	0.021	0.003	0.061	0.006	0.016	0.062	0.052															
16	0.000	0.012	0.031	0.037	0.046	0.051	0.027	0.000	0.025	0.007	0.018	0.019	0.038	0.041	0.043	0.033																
17	0.026	0.060	0.042	0.027	0.015	0.042	0.048	0.019	0.011	0.046	0.046	0.049	0.025	0.000	0.026																	
18	0.057	0.059	0.051	0.117	0.039	0.053	0.039	0.021	0.060	0.053	0.056	0.031	0.056	0.068																		
19	0.154	0.086	0.093	0.111	0.123	0.130	0.130	0.149	0.104	0.114	0.125	0.159	0.105																			
20	0.284	0.197	0.193	0.249	0.305	0.304	0.343	0.260	0.354	0.312	0.349	0.301																				
21	0.138	0.147	0.171	0.099	0.189	0.256	0.167	0.163	0.158	0.183	0.154																					
22	0.110	0.101	0.112	0.169	0.162	0.076	0.121	0.100	0.122	0.150																						
23	0.090	0.104	0.093	0.071	0.116	0.045	0.054	0.028	0.173																							
24	0.167	0.116	0.175	0.067	0.131	0.070	0.101	0.190																								
25	0.091	0.172	0.142	0.133	0.126	0.143	0.176																									
26	0.320	0.159	0.299	0.212	0.250	0.480																										
27	0.176	0.188	0.176	0.075	0.423																											
28	0.179	0.196	0.214	0.468																												
29	0.326	0.200	0.500																													
30	0.581	0.389																														

Table XCI LOSS RATES OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.500	0.436	0.229	0.207	0.214	0.133	0.125	0.114	0.000	0.170	0.147	0.239	0.277	0.042	0.000	0.200	
2															0.250	0.200	0.000	0.000	0.130	0.273	0.115	0.095	0.097	0.200	0.128	0.310	0.086	0.029	0.022	0.188		
3														0.064	0.000	0.000	0.000	0.074	0.150	0.000	0.087	0.053	0.036	0.000	0.000	0.100	0.000	0.000	0.133			
4													0.000	0.023	0.000	0.000	0.000	0.040	0.000	0.000	0.000	0.111	0.037	0.042	0.088	0.000	0.094	0.030				
5												0.000	0.091	0.163	0.111	0.125	0.045	0.042	0.100	0.158	0.000	0.031	0.077	0.043	0.065	0.000	0.069					
6											0.333	0.167	0.400	0.278	0.250	0.143	0.095	0.000	0.111	0.000	0.045	0.161	0.167	0.000	0.138	0.000						
7										0.500	0.250	0.000	0.333	0.231	0.250	0.000	0.105	0.304	0.125	0.059	0.048	0.231	0.200	0.318	0.080							
8									0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.059	0.188	0.214	0.125	0.200	0.300	0.250	0.333								
9								0.000	0.500	0.000	0.000	0.200	0.250	0.158	0.000	0.083	0.063	0.154	0.000	0.143	0.063	0.071	0.083									
10							0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.125	0.000	0.091	0.200	0.364	0.182	0.083	0.000	0.154										
11						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.071	0.100	0.000	0.167	0.000	0.222	0.182	0.267											
12					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.111	0.000	0.000	0.000	0.000	0.222												
13				0.000	0.000	0.200	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.077	0.125	0.000	0.000	0.000	0.000													
14				0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.083	0.143	0.000	0.000	0.000														
15		0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.100	0.000															
16		0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.143	0.111																
17		0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																	
18		0.000		0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.111																		
19		0.000		0.000	0.000	0.250	0.000	0.000		0.000	0.000	0.333	0.000																			
20		0.000		1.000	0.333	0.333	0.000	0.600		0.000	1.000	1.000																				
21		0.000			0.000	0.500	0.000	0.000		0.000																						
22		0.000			0.000	1.000	0.000	0.000		0.000																						
23		0.000			0.000		0.000	0.000																								
24		0.000			0.000		0.000	0.500																								
25		0.000			0.000		0.000																									
26		0.000			0.500																											
27		0.000			1.000																											
28		0.000																														
29		0.000																														
30		0.000																														

Table XCII LOSS RATES OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.600	0.571	0.471	0.333	0.167	0.083	0.036	0.263	0.000	0.108	0.000	0.159	0.145	0.040	0.052	0.102	
2															0.000	0.000	0.667	0.000	0.500	0.000	0.091	0.111	0.286	0.106	0.091	0.083	0.094	0.019	0.063	0.219		
3														0.000	0.000	0.000	0.000	0.000	0.000	0.167	0.000	0.042	0.000	0.000	0.100	0.000	0.000	0.000	0.000			
4													0.000	0.143	0.000	0.000	0.000	0.111	0.000	0.200	0.000	0.000	0.000	0.048	0.000	0.030	0.021	0.077				
5												0.333	0.167	0.167	0.000	0.250	0.000	0.125	0.000	0.000	0.000	0.083	0.000	0.050	0.000	0.031	0.085					
6											0.400	0.250	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.182	0.091	0.079	0.185	0.065						
7										0.000	0.000	0.333	0.200	0.400	0.571	0.000	0.000	0.000	0.000	0.000	0.200	0.056	0.200	0.171	0.318							
8									0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.429	0.000	0.000	0.125	0.059	0.250	0.207								
9								0.000	0.000	0.250	0.667	0.500	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.063	0.167									
10							0.000	0.000	0.500	0.333	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.133										
11						0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.286											
12					0.000	0.000	0.000	0.250		0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000												
13				0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000													
14				0.000	0.000	0.000	0.333	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000														
15		0.000		0.000	0.000	0.000	0.000	0.000		1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000															
16		0.000		0.000	0.000	0.000	0.000	0.000	0.000		1.000	0.000	0.000	0.333	0.000	0.000																
17		0.000		0.000	0.000	0.000	0.000	0.000	0.000			0.000	0.000	0.000	0.000																	
18		0.000		0.000	0.000	0.000	0.000	0.000	0.000			0.000	0.000	0.000																		
19		0.000		0.000	0.000	0.500	0.000	0.333	0.000			0.000	0.000																			
20		0.000		0.250	0.000	0.000	0.500	0.500	0.000			0.000																				
21		0.000		0.333	0.000	0.000	0.000	0.000	0.000																							
22		0.000		0.500	0.000	0.000	0.000	0.000	0.000																							
23		0.000		0.000	0.000	0.000	0.000	0.000	0.000																							
24		0.000		1.000	0.000	0.000	1.000	0.000																								
25		0.000			0.000	1.000																										
26		1.000			0.000																											
27					1.000																											
28																																
29																																
30																																

Table XCIII LOSS RATES OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.202	0.290	0.154	0.051	0.069	0.090	0.097	0.105	0.068	0.069	0.064	0.095	0.067	0.038	0.027	0.078	
2															0.037	0.030	0.052	0.025	0.051	0.033	0.050	0.054	0.081	0.095	0.038	0.051	0.059	0.021	0.029	0.087		
3														0.037	0.015	0.013	0.000	0.008	0.014	0.001	0.026	0.035	0.006	0.005	0.017	0.017	0.005	0.014	0.029			
4													0.104	0.072	0.044	0.048	0.028	0.009	0.000	0.005	0.021	0.032	0.004	0.023	0.019	0.006	0.014	0.043				
5												0.168	0.173	0.137	0.121	0.124	0.043	0.030	0.026	0.049	0.026	0.023	0.031	0.023	0.019	0.037	0.060					
6											0.166	0.216	0.252	0.275	0.173	0.153	0.118	0.094	0.088	0.133	0.109	0.145	0.112	0.065	0.078	0.101						
7										0.165	0.207	0.260	0.293	0.197	0.158	0.124	0.109	0.144	0.254	0.222	0.197	0.220	0.218	0.196	0.175							
8									0.103	0.140	0.208	0.216	0.115	0.035	0.064	0.091	0.149	0.190	0.183	0.178	0.158	0.202	0.255	0.237								
9								0.146	0.060	0.096	0.085	0.065	0.072	0.051	0.034	0.038	0.082	0.117	0.094	0.080	0.101	0.092	0.127									
10							0.055	0.232	0.159	0.163	0.105	0.084	0.000	0.044	0.080	0.171	0.090	0.112	0.059	0.065	0.026	0.045										
11						0.043	0.052	0.119	0.120	0.078	0.052	0.052	0.076	0.031	0.037	0.097	0.110	0.172	0.163	0.160	0.220											
12					0.032	0.035	0.027	0.041	0.060	0.007	0.035	0.058	0.035	0.028	0.069	0.060	0.086	0.052	0.086	0.063												
13				0.022	0.031	0.046	0.015	0.039	0.044	0.003	0.024	0.037	0.043	0.029	0.054	0.021	0.021	0.067	0.043													
14			0.039	0.048	0.032	0.003	0.031	0.018	0.030	0.016	0.011	0.025	0.034	0.036	0.030	0.017	0.064	0.026														
15		0.000	0.009	0.047	0.023	0.028	0.000	0.022	0.000	0.000	0.019	0.003	0.062	0.008	0.012	0.060	0.050															
160	0.000	0.012	0.028	0.031	0.045	0.047	0.026	0.000	0.024	0.008	0.017	0.018	0.038	0.046	0.044	0.039																
170	0.026	0.059	0.045	0.025	0.010	0.041	0.051	0.021	0.011	0.045	0.049	0.048	0.024	0.000	0.026																	
180	0.057	0.058	0.054	0.115	0.038	0.054	0.038	0.021	0.062	0.053	0.056	0.031	0.058	0.069																		
190	0.156	0.084	0.093	0.105	0.120	0.133	0.130	0.146	0.103	0.113	0.127	0.159	0.104																			
200	0.287	0.193	0.193	0.252	0.313	0.301	0.343	0.269	0.352	0.311	0.351	0.312																				
210	0.138	0.144	0.171	0.106	0.186	0.255	0.162	0.155	0.157	0.185	0.154																					
220	0.110	0.098	0.112	0.168	0.160	0.081	0.117	0.098	0.121	0.152																						
230	0.090	0.101	0.093	0.067	0.114	0.051	0.058	0.027	0.171																							
240	0.167	0.103	0.175	0.081	0.129	0.069	0.110	0.190																								
250	0.091	0.173	0.142	0.137	0.123	0.149	0.179																									
260	0.320	0.174	0.299	0.216	0.252	0.476																										
270	0.176	0.183	0.176	0.072	0.438																											
280	0.179	0.190	0.214	0.469																												
290	0.326	0.191	0.500																													
300	0.548	0.368																														

Table XCIV LOSS RATES OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.000		0.000	0.000	0.000	0.000	0.056	0.069	0.059	0.185	0.000	0.000	0.175	0.000	0.000	0.105	
2																0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.074	0.000	0.000	0.000	0.050	0.000	0.051	0.148		
3														0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.000	0.087	0.000	0.000	0.105	0.000			
4														0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.000	0.000	0.026	0.029				
5												0.000		0.000		0.000	0.000	0.200	0.000	0.053	0.000	0.000	0.000	0.000	0.048	0.043	0.081					
6											0.000	0.000		0.125		0.400	0.250	0.250	0.105	0.167	0.158	0.000	0.083	0.000	0.200	0.091						
7											0.000	1.000		0.143		0.000	0.333	0.167	0.118	0.133	0.125	0.176	0.273	0.118	0.250							
8											0.000			0.167		0.000	0.000	0.200	0.067	0.308	0.214	0.071	0.375	0.200								
9											0.000			0.000		0.000	0.000	0.250	0.143	0.111	0.091	0.000	0.300									
10											0.000			0.000		0.333	0.000	0.000	0.167	0.250	0.100	0.077										
11											1.000			0.000		0.000	0.500	0.667	0.100	0.333	0.000											
12														0.000		0.000	0.000	0.000	0.111	0.000												
13														0.400		0.000	0.000	0.000	0.250													
14														0.000		0.000	0.000	0.000														
15														0.000		0.500	0.000															
16														0.000		0.000																
17														0.000																		
18														0.000																		
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table XCV LOSS RATES OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.000	0.211	0.011	0.039	0.069	0.000	0.067	0.056	0.044	0.057	0.052	0.016	0.000	0.040	0.081	0.098	
2															0.000	0.018	0.044	0.047	0.038	0.000	0.065	0.018	0.053	0.030	0.024	0.074	0.067	0.038	0.020	0.039		
3														0.003	0.010	0.059	0.025	0.033	0.028	0.035	0.022	0.007	0.046	0.042	0.047	0.030	0.048	0.017	0.020			
4													0.133	0.071	0.056	0.136	0.170	0.111	0.143	0.081	0.154	0.204	0.173	0.185	0.185	0.197	0.066	0.049				
5												0.294	0.286	0.247	0.288	0.320	0.299	0.250	0.264	0.256	0.280	0.239	0.214	0.192	0.253	0.275	0.381					
6											0.282	0.134	0.205	0.206	0.190	0.130	0.085	0.076	0.091	0.089	0.143	0.136	0.091	0.077	0.062	0.091						
7										0.179	0.100	0.116	0.135	0.243	0.205	0.144	0.142	0.133	0.137	0.171	0.185	0.197	0.254	0.182	0.260							
8									0.143	0.081	0.111	0.125	0.119	0.084	0.091	0.039	0.086	0.109	0.130	0.101	0.168	0.120	0.253	0.188								
9								0.128	0.043	0.027	0.042	0.050	0.025	0.107	0.017	0.000	0.000	0.102	0.099	0.049	0.038	0.000	0.062									
10							0.100	0.086	0.091	0.119	0.113	0.135	0.043	0.077	0.042	0.192	0.067	0.102	0.110	0.051	0.092	0.062										
11						0.086	0.144	0.113	0.150	0.159	0.147	0.096	0.145	0.074	0.000	0.098	0.092	0.145	0.172	0.103	0.130											
12					0.075	0.019	0.065	0.032	0.176	0.075	0.092	0.106	0.053	0.080	0.097	0.091	0.072	0.096	0.083	0.090												
13				0.063	0.058	0.019	0.083	0.154	0.095	0.133	0.013	0.097	0.079	0.054	0.069	0.090	0.031	0.122	0.064													
14			0.102	0.090	0.037	0.059	0.091	0.130	0.026	0.094	0.064	0.036	0.049	0.080	0.042	0.022	0.024	0.056														
15		0.000	0.000	0.012	0.013	0.021	0.000	0.090	0.041	0.000	0.096	0.136	0.064	0.025	0.022	0.045	0.017															
16	0.028	0.011	0.000	0.013	0.026	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.027	0.051	0.011	0.047																
17	0.039	0.057	0.020	0.025	0.013	0.020	0.015	0.016	0.042	0.054	0.029	0.029	0.028	0.000	0.011																	
18	0.010	0.061	0.030	0.026	0.027	0.000	0.015	0.016	0.015	0.100	0.000	0.015	0.058	0.053																		
19	0.082	0.052	0.031	0.040	0.000	0.042	0.094	0.081	0.030	0.063	0.104	0.015	0.123																			
20	0.211	0.192	0.312	0.139	0.222	0.109	0.103	0.105	0.185	0.136	0.117	0.106																				
21	0.070	0.119	0.078	0.129	0.125	0.073	0.115	0.118	0.075	0.118	0.038																					
22	0.061	0.019	0.085	0.056	0.041	0.053	0.152	0.067	0.061	0.022																						
23	0.000	0.098	0.037	0.059	0.064	0.028	0.051	0.000	0.022																							
24	0.141	0.043	0.096	0.083	0.136	0.000	0.081	0.048																								
25	0.073	0.114	0.106	0.045	0.105	0.143	0.206																									
26	0.255	0.128	0.167	0.048	0.176	0.367																										
27	0.211	0.029	0.086	0.200	0.321																											
28	0.133	0.152	0.094	0.344																												
29	0.346	0.143	0.345																													
30	0.588	0.583																														

Table XCVI LOSS RATES OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.000	0.100	0.200	0.077	0.000	0.000	0.000	0.143	0.167	0.333	0.333	0.500	0.286	0.000	0.000	0.300	
2																0.000	0.000	0.000	0.083	0.000	0.091	0.250	0.000	0.200	0.000	0.000	0.000	0.000	0.000	0.000		
3														0.000		0.250	0.111	0.000	0.091	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000			
4														0.000		0.000	0.125	0.000	0.100	0.000	0.273	0.333	0.167	0.000	0.000	0.000	0.000	0.000				
5												0.000		0.000		0.000	0.286	0.400	0.111	0.400	0.125	0.000	0.200	0.000	0.500	0.000	0.667					
6											0.000	1.000		0.000		0.333	0.200	0.000	0.000	0.000	0.143	0.000	0.250	0.000	0.000	0.500						
7										0.000	0.000			0.000		0.500	0.000	0.000	0.000	0.000	0.333	0.500	0.000	0.000	0.000							
8									0.000	0.000	1.000			0.000		0.000	0.000	0.000	0.125	0.333	0.000	1.000	0.333	0.333								
9									0.000	0.000				0.000		0.000	0.000	0.667	0.143	0.500	0.000		0.000									
10							0.000		0.000	0.000				0.000		0.000	0.250	0.000	0.167	0.000	0.000											
11							0.000		1.000	0.000				0.000		0.000	1.000	1.000	0.400	1.000	0.000											
12							0.000			0.500				0.000		0.000			0.000													
13							0.000			1.000				0.000		0.000			0.333													
14							0.000							1.000		0.000																
15							0.000									0.000																
16							0.000			0.000						0.000																
17							0.000			0.000																						
18							0.000			0.000																						
19							0.000			0.000																						
20							0.000			0.000																						
21							0.000			0.000																						
22							0.000			0.000																						
23							0.000																									
24							0.000																									
25							0.000																									
26																																
27																																
28																																
29																																
30																																

Table XCVII LOSS RATES OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																1.000	0.000	0.000				0.625	0.167	0.091	0.444	0.000	0.000	0.000	0.111	0.250	0.111	
2																	0.000	0.000			0.000	0.000	0.000	0.000	0.000	0.143	0.000	0.200	0.125	0.111		
3														0.000			0.000	0.000			0.000	0.000	0.000	0.300	0.200	0.167	0.000	0.000	0.143			
4													0.000	0.000			0.500	1.000			0.000	0.250	0.000	0.429	0.000	0.400	0.125	0.250				
5												0.000	0.000	0.000			0.000				0.000	0.667	0.200	0.500	0.500	0.000	0.571					
6												0.000	1.000	0.500			0.000				0.500	0.000	0.000	0.000	0.500	0.000						
7										0.000		0.000		0.000			0.000				1.000	1.000	0.000	0.000	0.000							
8									1.000	0.000		0.500		0.000			0.000						0.500	0.500								
9								1.000		0.000		0.000		0.000			0.000						0.500									
10										0.000		0.000		0.000			0.000															
11							0.000			0.000		0.000		0.000			0.000															
12							0.000			0.000		0.000		1.000			0.000															
13							0.000			0.000		0.000					0.000															
14							0.000			0.000		0.000	0.000																			
15							0.000			0.000		0.000	0.000																			
16							0.000			0.000		0.500																				
17							0.000			0.000		0.000																				
18							0.000			0.000		0.000																				
19							0.000			1.000		0.000																				
20							0.000					0.000																				
21							0.000																									
22							0.000																									
23							0.000																									
24							0.000																									
25							0.000																									
26		0.000																														
27		0.000																														
28		0.000																														
29		0.000																														
30		0.000																														

APPENDIX G - PROMOTION RATES

Table XCVIII PROMOTION RATES OF WHITE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.115	0.101	0.105														
2															0.987	0.957	1.003	1.017	1.046	0.964	1.017	0.969	0.993	0.998	1.000	0.996	0.416	0.967	1.008	0.989		
3															0.051	0.053	0.066	0.048	0.500		0.667	0.143	0.444	0.333	0.667		0.919	0.400	1.000			
4													0.746	0.707	0.749	0.706	0.729	0.773	0.738	0.685	0.587	0.695	0.718	0.708	0.747	0.609	0.649	0.649				
5												0.638	0.071	0.128	0.200	0.169	0.083	0.729	0.750	0.576	0.699	0.643	0.571	0.442	0.464	0.603	0.457					
6													1.000				1.000					1.000			0.500	0.500						
7																0.500																
8													0.090	0.007					0.005			0.002	0.010									
9								0.465	0.388	0.522	0.482	0.665	0.625	0.819	0.733	0.469	0.540	0.307	0.104	0.034	0.016	0.038	0.004									
10								0.513	0.643	0.703	0.693	0.699	0.816	0.500	0.633	0.665	0.671	0.694	0.748	0.690	0.730	0.599										
11									0.054			0.500	0.091		0.600		0.059	0.095	0.067	0.400	0.197											
12											0.167						0.250															
13								0.004		0.011						0.004	0.011	0.011	0.004													
14				0.004	0.072	0.156	0.277	0.109	0.180	0.230	0.026		0.021	0.065	0.013	0.004	0.039	0.007														
15		0.462	0.451	0.629	0.645	0.591	0.899	0.722	0.788	0.745	0.761	0.712	0.673	0.695	0.484	0.617	0.651															
16	0.724	0.333	0.357	0.170	0.277	0.423	0.138	0.036	0.057		0.022	0.067	0.012	0.015	0.354	0.193																
17			0.042	0.014					0.031			0.019			0.103																	
18			0.015							0.021																						
19		0.017									0.018		0.018																			
20			0.012			0.011	0.005	0.029		0.016	0.020	0.013																				
21	0.224	0.375	0.253	0.306	0.292	0.429	0.577	0.437	0.398	0.290	0.250																					
22	0.518	0.616	0.466	0.507	0.451	0.234	0.038	0.262	0.290	0.489																						
23					0.056																											
24																																
25																																
26		0.010				0.028																										
27	0.065	0.011	0.033	0.096	0.052																											
28	0.038	0.038	0.075	0.068																												
29	0.051	0.046	0.030																													
30		0.020																														

Table XCIX PROMOTION RATES OF BLACK SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.088	0.063	0.088														
2															1.036	0.978	0.846	0.988	1.000	1.000	0.954	0.957	1.033	0.920	0.920	0.982	0.526	0.957	0.957	0.974		
3															0.069	0.042	0.061	0.033									0.867					
4													1.120	0.621	0.650	0.769	0.857	0.778	0.727	0.561	0.630	0.593	0.661	0.759	0.844	0.600	0.593	0.641				
5																0.333		0.333	0.500	0.333	0.286		1.000	0.400		0.667	0.429					
6																																
7																																
8													0.063																			
9									1.000	0.286	0.571	0.833	0.500	0.600	0.625	0.500	0.333	0.206	0.036	0.100		0.050										
10										0.667	1.000		1.000	0.250	1.000	0.636	0.500	0.542	0.760	0.882	0.529	0.824										
11																				1.000	0.167											
12																																
13																		0.048	0.053													
14							0.500					0.250				0.071	0.154															
15			1.000	1.000	0.750		1.000			0.500	0.800	0.667	0.700	0.250	0.222	0.615	0.273															
16					0.500	1.000									0.571																	
17															0.333																	
18																																
19																																
20											0.200																					
21	1.000		0.333	1.000	0.333		0.400			0.500	0.333																					
22			1.000		0.500																											
23																																
24																																
25																																
26			0.333																													
27																																
28																																
29			0.500																													
30																																

Table C PROMOTION RATES OF HISPANIC SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																	0.500	0.100														
2															1.000	0.600	2.000	1.000	1.250	1.000	1.050	0.958	1.000	0.955	0.981	0.966	0.500	1.000	1.040	1.015		
3																	0.250										0.931					
4													0.667	0.667	1.000	0.667	0.667	0.692	0.750	0.500	0.750	0.864	0.750	0.645	0.735	0.648	0.469	0.619				
5																	1.000	0.333					1.000		0.500	0.364	0.333					
6																																
7																																
8																																
9								0.667	0.333				1.000	1.000	1.000		1.000	0.429		0.500		0.286										
10									1.000	1.000						0.500		0.250			0.600	0.750										
11																																
12																																
13																																
14									0.333																							
15				1.000	0.500		1.000	0.500	0.500					1.000	0.500		1.000															
16																																
17																																
18																																
19																																
20																																
21							1.000		1.000																							
22				1.000																												
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table CI PROMOTION RATES OF MALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.114	0.100	0.104														
2															0.990	0.956	0.996	1.012	1.035	0.962	1.013	0.962	0.996	0.991	0.992	0.994	0.427	0.966	1.008	0.992		
3															0.051	0.053	0.066	0.047	0.500	0.100	0.400	0.125	0.400	0.333	0.667		0.910	0.333	0.500			
4													0.754	0.703	0.747	0.707	0.731	0.766	0.733	0.674	0.590	0.691	0.714	0.706	0.754	0.608	0.635	0.643				
5													0.070	0.125	0.214	0.177	0.080	0.689	0.708	0.558	0.661	0.643	0.625	0.429	0.438	0.589	0.429					
6													1.000				2.000					1.000			0.500	0.333						
7																0.500				0.002												
8													0.085	0.006					0.004				0.009									
9								0.464	0.389	0.516	0.481	0.668	0.623	0.814	0.734	0.468	0.523	0.300	0.098	0.040	0.015	0.040	0.004									
10								0.510	0.652	0.702	0.697	0.694	0.815	0.476	0.667	0.663	0.652	0.671	0.737	0.695	0.714	0.599										
11									0.324		0.048	0.500	0.091		0.600		0.056	0.078	0.060	0.410	0.186											
12								0.429									0.250															
13								0.004		0.010						0.004	0.011	0.013	0.008													
14				0.003	0.070	0.154	0.282	0.108	0.180	0.227	0.025	0.004	0.020	0.063	0.013	0.008	0.045	0.007													
15		0.461	0.455	0.634	0.643	0.578	0.907	0.720	0.805	0.738	0.752	0.711	0.673	0.687	0.470	0.611	0.640															
16	0.719	0.332	0.355	0.170	0.276	0.329	0.138	0.036	0.054		0.021	0.067	0.012		0.350	0.180																
17			0.042	0.014					0.030			0.019			0.108																	
18			0.015		0.015					0.020																						
19		0.017									0.018		0.017																			
20			0.011			0.011	0.005	0.029		0.021	0.025	0.013																				
21	0.227	0.375	0.254	0.319	0.289	0.426	0.574	0.437	0.400	0.297	0.250																					
22	0.513	0.616	0.473	0.514	0.443	0.231	0.035	0.262	0.286	0.489																						
23					0.053																											
24																																
25																																
26		0.010	0.010			0.028																										
27	0.079	0.011	0.032	0.091	0.051																											
28	0.038	0.038	0.073	0.065																												
29	0.050	0.046	0.044																													
30		0.020																														

Table CII PROMOTION RATES OF FEMALE SURFACE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																			2.800	1.150	1.118	1.250	0.895	1.000	1.000	0.944	0.381	1.059	0.967	0.929		
2																	3.000															
3													1.000			1.000	1.000	1.125	0.947	1.000	0.722	0.850	0.875	0.824	0.647	0.765	0.696	0.833				
4																		0.800	2.000	1.000							0.667					
5																																
6																																
7													1.000				0.750					0.100										
8														1.000	0.800	0.200		0.375				0.125										
9																		0.857	1.500	1.000	1.000	1.000										
10																																
11																																
12																																
13																																
14															1.000	1.000																
15																																
16																																
17																																
18																																
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table CIII PROMOTION RATES OF WHITE GENERAL RESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.042	0.061	0.125			0.002							0.006				
2															0.629	0.962	1.013	0.949	0.899	0.986	0.930	0.938	0.991	0.957	1.013	0.974	0.497	0.881	0.942	1.024		
3															0.012	0.038	0.030	0.023	0.250													
4													0.308	0.601	0.630	0.668	0.364	0.619	0.662	0.684	0.732	0.879	0.715	0.724	0.698	0.605	0.630	0.692				
5												0.134		0.160	0.034	0.091	0.432	0.697	0.667	0.739	0.792		0.088	0.276	0.119	0.400	0.389					
6																		0.500							1.000							
7																																
8									0.023			0.045	0.302										0.006									
9								0.139	0.500	0.667	0.645	0.689	0.486	0.789	0.593	0.629	0.531	0.299	0.149	0.078	0.009	0.006	0.007									
10								0.417		0.533	0.400	0.500	0.500	0.143	0.656	0.308	0.381	0.554	0.709	0.503	0.620	0.547										
11									0.500	0.111	0.111			0.250	0.250			0.059		0.321	0.132											
12																																
13							0.100											0.011														
14					0.455	0.450	0.273	0.190	0.259	0.375		0.057	0.023		0.027	0.013	0.094	0.023														
15		0.313	0.250	0.667	0.571	0.636	0.625	0.667	0.500	0.714	0.577	0.613	0.488	0.610	0.522	0.616	0.571															
16	0.462	0.444	0.714		0.333	0.167	0.667			0.125		0.250		0.029	0.500	0.148																
17																																
18																																
19								0.053			0.031																					
20								0.111		0.040	0.065																					
21	0.500	0.333	0.300	0.286	0.154	0.214	0.400	0.143	0.300	0.308	0.333																					
22	0.250	0.667	0.200	0.400	0.333			0.125		0.250																						
23																																
24																																
25																																
26		0.167																														
27																																
28				0.333																												
29																																
30																																

Table CIV PROMOTION RATES OF BLACK GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																		0.160														
2															0.769	0.917	1.571	1.000	0.955	1.375	1.050	1.030	0.938	1.000	1.063	1.024	0.565	1.000	1.083	1.000		
3																																
4													0.133	0.917	0.800	0.538	0.455	0.636	0.850	0.611	0.714	0.971	0.964	0.606	0.833	0.667	0.739	0.733				
5																	0.333	0.500	2.000	1.000	0.800			0.500	0.250	0.167						
6																																
7																																
8																																
9								1.000			1.000	1.000	1.000	0.778	0.400	1.000	0.250	0.450	0.063	0.286												
10														0.500	0.667		0.200	0.444	0.308	0.400	0.467	0.591										
11																					0.143											
12																																
13																																
14						1.000	1.000	1.000																								
15											1.000	0.500	0.333	0.800		0.500	0.667															
16															0.250																	
17																																
18																																
19								1.000																								
20																																
21											1.000																					
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table CV PROMOTION RATES OF HISPANIC GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																																
2																1.000	1.000	0.800	0.500	0.750	0.800	0.857	0.889	1.000	1.000	0.933	0.800	1.000		0.900		
3																																
4													0.500	1.000	1.000	0.500	0.500	0.667	1.000		0.750	0.600	0.750	0.714	0.500	0.923	0.727	0.750				
5																					1.000											
6																																
7																																
8																																
9														1.000	1.000	1.000		1.000														
10																					0.500	0.500										
11																																
12																																
13																																
14																																
15															1.000																	
16																																
17																																
18																																
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table CVI PROMOTION RATES OF MALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.063	0.110	0.373			0.011							0.015				
2															0.371	0.951	1.113	0.986	0.959	1.146	0.840	1.000	1.178	1.000	1.169	1.111	0.404	0.897	0.893	1.115		
3															0.037	0.070	0.044	0.075	0.333	0.333		2.000	0.667				1.450	0.786	2.000			
4													0.209	0.302	0.372	0.453	0.284	0.699	0.730	0.672	0.814	0.922	0.429	0.570	0.360	0.337	0.468	0.594				
5															0.034	0.031	0.042	0.091	0.556	0.346	0.313		0.031	0.074	0.043	0.118	0.130					
6																		1.000	1.000													
7															1.000																	
8																																
9								0.083	0.083		0.200		0.333	0.222	0.182	0.167	0.111	0.034														
10										0.167		0.429				0.176					0.138	0.217										
11											0.333									0.056												
12																																
13							0.500																									
14							0.333	0.200	0.200	0.500								0.333														
15				0.667	3.000	0.625	0.500	0.667	0.200	0.500	0.167	0.250		0.250	0.333		1.000															
16			0.200		1.000	0.200	0.500	0.200					0.333			0.400																
17						0.200																										
18																																
19																																
20																																
21			0.250	0.500			0.250		0.500																							
22					0.500																											
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table CVII PROMOTION RATES OF FEMALE GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.024	0.017	0.076										0.008				
2															0.948	0.960	0.978	0.939	0.883	0.955	0.953	0.943	0.958	0.958	0.971	0.947	0.552	0.887	0.971	0.980		
3																0.021	0.011															
4													0.505	0.804	0.810	0.795	0.476	0.575	0.655	0.685	0.710	0.869	0.842	0.769	0.872	0.766	0.723	0.754				
5														0.800		0.400	0.826	0.893	0.727	0.960	0.906		0.286	0.800	0.444	0.783	0.650					
6																									0.667							
7																																
8									0.042			0.043	0.308										0.005									
9								0.400	0.682	0.732	0.690	0.805	0.586	0.830	0.636	0.736	0.667	0.389	0.167	0.096	0.010	0.006	0.006									
10								0.500		0.700	0.462	0.500	0.667	0.273	0.742	0.391	0.692	0.714	0.840	0.573	0.675	0.591										
11									0.500	0.333				0.250	0.250			0.063		0.409	0.179											
12																																
13																		0.010														
14					0.500	0.667	0.333	0.176	0.278	0.355		0.065	0.024		0.026	0.013	0.088	0.010														
15		0.417	0.400	0.667	0.167	0.667	0.667	0.692	0.667	0.700	0.646	0.655	0.550	0.635	0.500	0.649	0.567															
16	0.900	0.500	2.000		0.200		1.000			0.125		0.300			0.486	0.080																
17																																
18																																
19								0.083			0.032																					
20								0.182		0.042	0.067																					
21	0.600	0.333	0.333	0.200	0.222	0.500	0.333	0.250	0.250	0.308	0.400																					
22	1.000	1.000	1.000	0.500	0.200			0.667		0.250																						
23																																
24																																
25																																
26		0.200																														
27																																
28				0.500																												
29																																
30																																

Table CVIII PROMOTION RATES OF WHITE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.154	0.073	0.133			0.001								0.001			0.001
2															0.966	0.966	0.945	0.973	0.951	0.973	0.951	0.944	0.921	0.912	0.961	0.954	0.448	0.976	0.966	0.916		
3															0.103	0.133	0.079	0.111											0.001			
4													0.861	0.892	0.890	0.918	0.937	0.936	0.932	0.943	0.910	0.877	0.913	0.897	0.920	0.909	0.904	0.930				
5												0.564	0.143	0.348	0.671	0.500	0.697	0.940	0.908	0.869	0.932	0.921	0.865	0.898	0.862	0.832	0.800					
6																	1.000								1.000	0.600						
7																																
8										0.001			0.085	0.007	0.004				0.001			0.001	0.002									
9								0.417	0.400	0.499	0.575	0.697	0.686	0.843	0.823	0.585	0.634	0.350	0.097	0.064	0.011	0.025										
10							0.718	0.450	0.589	0.645	0.665	0.615	0.703	0.127	0.518	0.615	0.651	0.688	0.795	0.660	0.735	0.479										
11									0.485	0.125	0.289	0.364	0.115	0.083	0.200		0.333	0.040	0.015	0.399	0.203											
12								0.375	0.250	0.273	0.500	0.091		0.250						0.250												
13									2.000	0.007						0.004	0.011	0.025	0.003													
14				0.003	0.062	0.101	0.247	0.164	0.236	0.243	0.021	0.021	0.020	0.031	0.019	0.020	0.051	0.009														
15		0.540	0.583	0.629	0.519	0.506	0.683	0.749	0.719	0.724	0.690	0.729	0.636	0.638	0.550	0.603	0.600															
16	0.609	0.378	0.359	0.237	0.208	0.113	0.042		0.010	0.078	0.027	0.150	0.007	0.018	0.228	0.089																
17			0.013			0.017	0.009	0.012			0.039		0.009		0.025																	
18	0.005		0.028		0.016			0.013		0.009				0.007																		
19							0.013	0.003			0.009																					
20			0.005			0.009	0.015	0.006		0.036	0.025	0.009																				
21	0.345	0.434	0.292	0.373	0.349	0.370	0.547	0.456	0.426	0.324	0.280																					
22	0.449	0.636	0.459	0.438	0.345	0.250		0.248	0.161	0.252																						
23					0.043																											
24				0.050																												
25																																
26			0.013																													
27		0.015		0.015	0.078																											
28	0.070	0.127	0.089	0.033																												
29	0.143	0.053	0.051																													
30																																

Table CIX PROMOTION RATES OF BLACK AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	19901991
1																0.075	0.026	0.086													
2															0.750	0.824	1.000	0.958	0.870	0.727	0.885	0.857	0.871	0.800	0.872	0.690	0.600	0.971	0.957	0.813	
3															0.333	0.063	0.045	0.037													
4													0.909	0.955	1.000	1.000	0.952	0.833	1.118	0.944	0.952	0.833	0.963	0.750	0.765	1.000	0.750	0.848			
5												1.000	1.000					1.000		0.500	1.000	0.500		0.800	0.400		0.800				
6																															
7																															
8														0.100																	
9								0.600	0.500	1.000	0.333	0.400	0.250	0.706	1.000	0.667	0.813	0.385	0.091	0.071	0.063	0.071									
10								1.000				1.000	0.500			0.667	0.500	0.333	0.700	0.727	0.714	0.667									
11																															
12																															
13																		0.143	0.143												
14								0.600						0.333	0.143																
15		1.000			0.500	0.250	1.000	0.500	1.000	1.000			1.000	0.429	0.800	0.700	0.400														
16																															
17																															
18																															
19																															
20																															
21		1.000			1.000		1.000	0.500																							
22										1.000																					
23																															
24																															
25																															
26																															
27																															
28																															
29																															
30																															

Table CX PROMOTION RATES OF HISPANIC AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.100		0.176														
2															1.167	1.000	0.333	1.000	0.500	1.200	0.909	0.889	0.714	0.894	0.909	0.917	0.528	0.981	0.917	0.792		
3															0.143	0.250		0.111														
4													1.000	0.714	0.833	1.000	1.000	0.875	1.000	0.800	1.000	0.957	0.818	0.714	0.926	0.758	0.833	0.865				
5														1.000	1.000							0.500	1.000	0.900	0.500	0.714	0.714					
6																										1.000						
7																																
8																																
9								1.000		0.500	0.333	0.500	0.667	1.000	1.000	1.000	0.500	0.750				0.125										
10																	1.000	1.000		1.000	0.571	0.615										
11																																
12																																
13																																
14							0.667	1.000																								
15		1.000		0.500	1.000							1.000		0.333	1.333	1.000	0.500															
16						0.500			1.000																							
17																																
18																																
19																																
20																																
21		1.000		0.500	1.000			1.000																								
22									1.000																							
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table CXI PROMOTION RATES OF MALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.153	0.072	0.132			0.001								0.001		0.001	
2															0.962	0.963	0.945	0.972	0.946	0.964	0.946	0.940	0.916	0.904	0.955	0.945	0.453	0.969	0.966	0.909		
3															0.106	0.135	0.079	0.110											0.001			
4													0.861	0.893	0.889	0.919	0.941	0.932	0.934	0.942	0.910	0.876	0.913	0.890	0.915	0.906	0.900	0.924				
5												0.564	0.158	0.340	0.671	0.500	0.656	0.944	0.892	0.859	0.934	0.910	0.869	0.893	0.819	0.818	0.788					
6																	1.000								0.667	0.714						
7																																
8										0.001			0.084	0.011	0.004				0.001			0.001	0.002									
9								0.422	0.398	0.501	0.571	0.693	0.681	0.834	0.826	0.588	0.635	0.352	0.098	0.066	0.012	0.026										
10							0.724	0.451	0.584	0.644	0.663	0.617	0.694	0.119	0.513	0.619	0.653	0.682	0.789	0.660	0.728	0.480										
11									0.464	0.125	0.289	0.364	0.107	0.083	0.182		0.318	0.041	0.014	0.385	0.189											
12								0.375	0.250	0.273	0.500	0.091		0.250						0.214												
13										0.007						0.002	0.010	0.026	0.005													
14				0.003	0.061	0.099	0.250	0.172	0.235	0.244	0.021	0.020	0.019	0.038	0.020	0.019	0.050	0.009													
15		0.545	0.581	0.629	0.516	0.501	0.686	0.748	0.722	0.724	0.688	0.723	0.635	0.630	0.555	0.604	0.596															
16	0.611	0.383	0.356	0.235	0.209	0.116	0.042		0.010	0.078	0.026	0.144	0.007	0.018	0.227	0.086																
17			0.013			0.017	0.009	0.012			0.038		0.009		0.024																	
18	0.009		0.028		0.015			0.013		0.009																						
19							0.013	0.003			0.009																					
20			0.005			0.009	0.014	0.006			0.025	0.009																				
21	0.345	0.443	0.292	0.380	0.358	0.368	0.544	0.466	0.427		0.280																					
22	0.449	0.642	0.459	0.422	0.345	0.240		0.245	0.160																							
23					0.043																											
24				0.043																												
25																																
26			0.013																													
27		0.014		0.015	0.076																											
28	0.054	0.123	0.089	0.032																												
29	0.070	0.050	0.051																													
30	0.143																															

Table CXII PROMOTION RATES OF FEMALE AVIATION WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																		0.250														
2																1.250	0.750	1.000	1.667	1.417	1.188	1.000	0.926	1.125	1.045	1.125	0.350	1.152	0.949	0.852		
3																																
4														0.857		1.000	0.500	1.000	1.077	1.000	1.000	1.000	1.000	0.833	0.952	0.956	0.895	0.971				
5														1.000			1.000	1.000	1.000					1.000		1.000	1.000					
6																																
7																																
8																																
9											1.000			1.000		0.667	1.000	0.250	0.071			0.077										
10																		0.500	0.818	0.750	0.900	0.917										
11																																
12																																
13																0.500																
14																																
15													1.000			1.000																
16																																
17																																
18																																
19																																
20																																
21																																
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table CXIII PROMOTION RATES OF WHITE SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																0.073	0.044	0.073													0.002	
2																0.975	0.956	0.957	0.960	1.051	0.933	0.978	0.945	0.970	0.976	0.926	0.389	0.960	0.980	0.961		
3															0.055	0.048	0.051	0.051														
4													0.857	0.924	0.941	0.854	0.815	0.824	0.795	0.823	0.752	0.780	0.818	0.789	0.808	0.654	0.741	0.785				
5												0.615		0.500	1.000	0.429	0.125	0.519	0.407	0.548	0.350	0.167	0.667	0.800		0.506	0.635					
6																		1.000							1.000							
7																						1.000										
8													0.052	0.007																		
9								0.694	0.572	0.599	0.600	0.850	0.739	0.631	0.858	0.725	0.850	0.294	0.005			0.005	0.010									
10							0.478	0.500	0.774	0.745	0.698	0.643	0.923	0.886	0.846	0.619	0.769	0.739	0.094	0.083	0.063	0.056										
11										0.143	0.250		1.000					0.133	0.747	0.702	0.754	0.739										
12																				0.512	0.458											
13											1.000			0.011				0.024														
14					0.025	0.098	0.231	0.169	0.171	0.226	0.013	0.024	0.012	0.047	0.021		0.073	0.048														
15		0.655	0.732	0.864	0.789	0.860	0.933	0.833	0.918	0.862	0.736	0.772	0.714	0.763	0.708	0.820	0.759															
16	0.743	0.419	0.276	0.100	0.267					0.125	0.333	0.333			0.250	0.167																
17																																
18																																
19																																
20	0.014					0.048	0.019	0.036		0.018	0.018	0.016																				
21	0.217	0.586	0.453	0.525	0.607	0.718	0.588	0.633	0.642	0.460	0.308																					
22	0.700	0.889	0.517	0.682	0.400	0.300		0.167	0.467	0.500																						
23																																
24																																
25																																
26																																
27	0.055556			0.029																												
28	0.071	0.061	0.065	0.094																												
29	0.045	0.038	0.077																													
30																																

Table CXIV PROMOTION RATES OF BLACK SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																	0.300															
2																1.000	1.000	1.000	0.917	1.667	0.909	0.750	1.000	0.800	1.000	1.000	1.000	1.000	1.000	1.000		
3																	0.222															
4														1.000		1.000	1.000	1.250	0.900	0.800	0.727	0.667	0.833	1.000	1.000	0.500	1.000	0.800				
5												1.000														1.000						
6																																
7																																
8																																
9									1.000					1.000		1.000	0.250		0.143													
10										1.000									0.400		0.750											
11																					1.000											
12																																
13																			0.333													
14							1.000																									
15																1.000																
16																																
17																																
18																																
19																																
20																																
21							1.000			1.000																						
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

Table CXV PROMOTION RATES OF HISPANIC SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE FOR YEAR GROUPS 1960 - 1991

YOS	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
1																	0.500															
2																	1.000	1.000			1.000	1.333	1.000	1.000	1.000	0.857	0.750	0.800	0.875	0.889		
3																																
4													1.000	1.000			1.000				1.000	0.750	1.000	0.571	1.000	0.400	0.375	0.500				
5												1.000											1.000			1.000	0.500					
6																																
7																																
8																																
9												1.000		1.000			1.000															
10										1.000																						
11																																
12																																
13																																
14																																
15							1.000			1.000		1.000					1.000															
16																																
17																																
18																																
19																																
20																																
21							1.000																									
22																																
23																																
24																																
25																																
26																																
27																																
28																																
29																																
30																																

APPENDIX H - LOSS RATES BY YEAR OF SERVICE AVERAGED ACROSS YEAR GROUPS

Table CXVI LOSS RATES OF SURFACE WARFARE OFFICERS BY YEAR OF SERVICE

YOS	LOSS RATES				
	ETHNIC			GENDER	
	WHITE	BLACK	HISPANIC	MALE	FEMALE
1	.000	.034	.000	.001	.031
4	.000	.026	.017	.211	.000
3	.168	.127	.133	.111	.000
4	.245	.238	.238	.000	.141
5	.286	.029	.047	.280	.155
6	.200	.162	.211	.211	.000
4	.059	.108	.117	.108	.000
8	.110	.110	.000	.112	.128
9	.050	.071	.085	.088	.186
10	.093	.117	.000	.000	.000
11	.098	.135	.286	.110	.095
12	.025	.043	.025	.047	.000
13	.047	.050	.053	.000	.095
12	.034	.020	.000	.000	.000
18	.043	.025	.000	.000	.167
16	.110	.029	.000	.015	.000
12	.043	.034	.000	.023	.000
18	.017	.063	.050	.043	.000
19	.286	.098	.206	.076	.095
20	.200	.133	.026	.288	
21	.156	.168	.286	.169	
22	.110	.059	.000	.108	
23	.080	.000	.000	.080	
27	.047	.168	.000	.124	
25	.121	.050	.000	.108	
26	.276	.050	.000	.272	
27	.168	.286	.206	.169	
28	.173	.050	1.00	.173	
29	.298	.000		.294	
30	.663	.000		.644	

Table CXVII LOSS RATES OF GENERAL WARFARE OFFICERS BY YEAR OF SERVICE

YOS	LOSS RATES				
	ETHNIC			GENDER	
	WHITE	BLACK	HISPANIC	MALE	FEMALE
1	.0962	.0429	.0909	.0962	.0288
2	.2500	.2444	.0876	.1176	.0403
3	.0487	.0876	.1250	.1971	.0817
4	.2137	.1602	.1757	.0909	.1608
5	.0280	.1250	.1600	.5935	.1191
6	.1630	.0797	.1602	.3451	.1154
7	.1600	.0794	.1600	.2484	.0815
8	.0973	.1608	.2105	.1600	.0553
9	.0679	.0909	.0909	.1250	.0587
10	.0973	.0973	.2500	.4848	.0577
11	.0876	.2444	.0897	.4848	.0196
12	.0629	.0629	.0262	.2319	.0527
13	.0497	.2444	.2105	.0794	.0553
14	.0429	.0909	.0909	.1169	.0325
15	.0327	.2105	.0000	.1299	.0196
16	.0280	.1608	.1600	.2262	.0185
17	.0262	.0909	.1602	.0429	.0288
18	.0487	.1600	.1600	.0876	.0327
19	.1608	.1600	.2500	.1600	.0996
20	.3534	.1667	.1602	.0679	.3797
21	.2444	.2500	1.000	.4211	.2500
22	.1071	.1602	.1602	.2727	.0364
23	.1324	.0962	.0962	.0962	.0288
24	.2444	.2500	1.000	.4211	.1282
25	.0909	.1602		.0262	.1191
26	.3793			.0973	.4545
27	.1333			.2500	.1818
28	.2727			.0909	.1429
29	.6000			1.000	.5000
30	1.000				1.000

Table CXVIII LOSS RATES OF AVIATION WARFARE OFFICERS BY YEAR OF SERVICE

YOS	LOSS RATES				
	ETHNIC			GENDER	
	WHITE	BLACK	HISPANIC	MALE	FEMALE
4	.0951	.1966	.1416	.1000	.0566
4	.0458	.1250	.1416	.0504	.0442
3	.0986	.0000	.0152	.0000	.0225
4	.0305	.0479	.0315	.0315	.0110
5	.0694	.0260	.0641	.2692	.0369
6	.1423	.0444	.0909	.1416	.1171
7	.1966	.1258	.0484	.1966	.1773
5	.1625	.0986	.1414	.1619	.1923
9	.0458	.0000	.1000	.0909	.1111
10	.0990	.1278	.1250	.0990	.1228
11	.0986	.1161	.0000	.0000	.1842
17	.0277	.0444	.0909	.0479	.0455
13	.0342	.0000	.0000	.0986	.2353
17	.0277	.0000	.0000	.0281	.0110
18	.1270	.0333	.0000	.0213	.1667
16	.0265	.0816	.0800	.0268	.0225
17	.0314	.0000	1.000	.0315	.0110
18	.0525	.0525	.0526	.0528	.0110
19	.1232	.0800	.1250	.1226	
20	.2957	1.000	.3077	.2979	
21	.1667	.1414	.1250	.0000	
22	.1233	.1250	.0444	.1227	
23	.0000	.0000	.0000	.0845	
24	.0986	.1667	.3333	.0986	
25	.0444	.0000	.3333	.1432	
26	.2930	.3333	.0000	.2943	
27	.2143	.0000	1.000	.2163	
23	.2696	.0000		.2692	
29	.3407	.0000		.3358	
30	.5393	.0000		.4493	

Table CXIX LOSS RATES OF SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE

YOS	LOSS RATES		
	ETHNIC		
	WHITE	BLACK	HISPANIC
1	.0543	.1489	.2235
2	.0928	.0928	.0615
3	.0306	.0563	.1071
4	.1849	.1849	.2222
5	.4000	.2143	.3235
6	.0000	.1849	.0000
7	.1714	.1053	.1429
8	.1267	.1250	.4167
9	.0503	.1538	.0000
10	.0928	.0313	.0000
11	.1175	.4000	.0000
12	.0845	.1250	.0000
13	.0783	.2857	.0000
14	.0615	.2500	.0000
15	.0000	.0000	.0000
16	.2143	.0000	.0250
17	.1714	.0000	.0000
18	.0313	.0000	.0000
19	.4000	.0000	.3333
20	.1714	.0000	.0000
21	.0962	.0000	.0000
22	.0000	.0000	.0000
23	.0000	.0000	.0000
24	.0842	.0000	.0000
25	.1077	.0000	.0000
26	.1849		.0000
27	.1657		.0000
28	.0000		.0000
29	.2771		.0000
30	.5854		.0000

APPENDIX I - PROMOTION RATES BY YEAR OF SERVICE AVERAGED ACROSS YEAR GROUPS

Table CXX PROMOTION RATES OF SURFACE WARFARE OFFICERS BY YEAR OF SERVICE

YOS	PROMOTION RATES				
	ETHNIC			GENDER	
	WHITE	BLACK	HISPANIC	MALE	FEMALE
8	.008	.013	.008	.020	.000
2	.000	.000	.936	.950	.996
3	.010	.010	.678	.543	.015
4	.000	.694	.663	.692	.200
5	.543	.010	.020	.531	.818
9	.333	.020		.375	
2	.000	.000	.000	.000	.000
8	.000	.450	.000	.000	.058
9	.366	.000	.000	.000	.200
10	.656	.678	.000	.950	.970
11	.000	.450	.000	.010	.000
14	.000	.000	.000	.000	.000
10	.000	.017	.000	.000	.000
14	.421	.421	.056	.421	.000
15	.543	.047	.020	.000	.667
15	.000	.000	.000	.000	.000
14	.000	.000	.000	.000	.000
18	.000	.000	.000	.000	.000
19	.001	.000	.000	.000	
20	.008	.000	.000	.000	.000
21	.000	.450	.000	.020	.000
22	.000	.375	.000	.421	
24	.000	.000		.000	
24	.000	.000		.000	
25	.000	.000		.000	
26	.000			.000	
27	.936	.936	.936	.047	
21	.000	.000		.000	
29	.041	.333		.046	
30	.013	.000		.012	

Table CXXI PROMOTION RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY YEAR OF SERVICE

YOS	PROMOTION RATES				
	ETHNIC			GENDER	
	WHITE	BLACK	HISPANIC	MALE	FEMALE
1	.006	.012	.000	.042	.001
2	.011	.997	.000	.000	.927
3	.006	.000	.476	.013	.001
1	.000	.000	.703	.476	.743
8	.000	.465	.476	.074	.799
6	.000	.000		.000	.000
7	.000	.011	.000	.000	.000
8	.011	.011	.000	.000	.011
3	.000	.000	.357	.000	.000
10	.006	.000	.476	.476	.000
11	.158	.006	.000	.022	.000
12	.027	.000	.000	.000	.000
13	.003	.000	.000	.017	.001
14	.081	.000	.000	.080	.077
15	.571	.480	.000	.357	.000
16	.465	.000	.000	.000	.231
17	.000	.000	.000	.000	.000
13	.000	.000	.000	.000	.000
19	.006	.000	.000	.000	.011
20	.027	.000	.000	.000	.000
24	.277	.333		.000	.337
22	.226	.000	.000	.000	.000
23	.006	.000	.000	.000	.000
24	.027	.000	.000	.000	.000
25	.000			.000	.000
26	.006			.000	.056
27	.000			.000	.000
28	.111			.000	.167
29	.000				.000
30	.000				.000

Table CXXII PROMOTION RATES OF AVIATION WARFARE OFFICERS BY YEAR OF SERVICE

YOS	PROMOTION RATES				
	ETHNIC			GENDER	
	WHITE	BLACK	HISPANIC	MALE	FEMALE
1	.024	.011	.415	.023	.003
2	.905	.804	.845	.905	.962
3	.024	.021	.010	.027	.000
4	.908	.891	.841	.907	.900
5	.024	.000	.735	.720	.938
6	.008	.000	.000	.563	
7	.000				
8	.005	.011	.005	.005	.000
9	.415	.390	.415	.415	.181
10	.626	.623	.643	.623	.800
11	.213	.000	.000	.000	.000
12	.008	.000		.203	
13	.003	.025	.005	.004	.059
14	.033	.118	.000	.080	.000
15	.633	.005	.545	.631	.800
16	.000	.000	.024	.190	
17	.009	.000	.000	.009	
18	.007	.005	.005	.005	
19	.002	.000	.000	.000	
20	.000	.000	.000	.000	
21	.381	.714	.005	.383	
22	.381	.000	.000	.000	
23	.005	.000	.000	.005	
24	.004	.000	.000	.004	
25	.415		.000	.000	
26	.002	.005	.005	.002	
27	.623	.005		.623	
28	.075	.000		.073	
29	.058	.000		.065	
30	.073	.000		.121	

Table CXXIII PROMOTION RATES OF SUBMARINE WARFARE OFFICERS BY YEAR OF SERVICE

YOS	PROMOTION RATES		
	ETHNIC		
	WHITE	BLACK	HISPANIC
1	.000	.032	.012
2	.891	.972	.922
3	.011	.028	.019
4	.801	.800	.674
5	.552	.667	.714
6	.500		
7	.000		
8	.000	.000	.000
9	.000	.192	.500
10	.011	.000	.000
11	.311	.143	
12	.000		
13	.000	.167	.000
14	.066	.333	.500
15	.783	1.00	.000
16	.387		
17	.000	.333	.000
18	.000	.000	.000
19	.000	.167	.000
20	.192	.000	.000
21	.000	1.00	.714
22	.500		
23	.000		
24	.000		
25	.000	.000	.674
26	.000		.000
27	.017		.000
28	.073		.000
29	.054		.000
30	.000		.000

APPENDIX J - LOSS RATES BY MILESTONE PERIOD AVERAGED ACROSS YEAR GROUPS

Table CXXIV MILESTONE PERIOD LOSS RATES OF SURFACE WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE PERIOD	YEARS OF SERVICE	LOSS RATES				
		ETHNIC			GENDER	
		WHITE	BLACK	HISPANIC	MALE	FEMALE
1	1-2	.005	.031	.017	.006	.033
2	3-6	.189	.173	.180	.190	.123
3	7-11	.110	.118	.138	.110	.150
3	12-17	.030	.038	.026	.030	.250
5	18-20	.129	.081	.259	.129	.000
6	21-26	.145	.091	.143	.188	
7	27-30	.256	.000		.252	

Table CXXV MILESTONE PERIOD LOSS RATES OF GENERAL UNRESTRICTED LINE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE PERIOD	YEARS OF SERVICE	LOSS RATES				
		ETHNIC			GENDER	
		WHITE	BLACK	HISPANIC	MALE	FEMALE
1	1-2	.0304	.0105	.0432	.0535	.0338
2	3-6	.1650	.1052	.1495	.3088	.1147
3	7-11	.0940	.1168	.1190	.2455	.0724
4	12-16	.0358	.0677	.0000	.1258	.0336
5	17-20	.1300	.0435	.2000	.1429	.1319
6	21-25	.1715	.2000	.5000	.2857	.1273
7	26-30	.3684		.0000	.3333	.0375

Table CXXVI MILESTONE PERIOD LOSS RATES OF AVIATION WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE PERIOD	YEARS OF SERVICE	LOSS RATES				
		ETHNIC			GENDER	
		WHITE	BLACK	HISPANIC	MALE	FEMALE
1	1-2	.0728	.1580	.1164	.0780	.0460
2	3-7	.0768	.0865	.0786	.0770	.0680
3	8-12	.0960	.1027	.1241	.0960	.1430
4	13-18	.0299	.0500	.0360	.0300	.0950
5	19-25	.1574	.1429	.1778	.1580	
6	26-30	.2496	.0000	1.000	.2460	

Table CXXVII MILESTONE PERIOD LOSS RATES OF SUBMARINE WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE PERIOD	YEARS OF SERVICE	LOSS RATES		
		ETHNIC		
		WHITE	BLACK	HISPANIC
1	1-2	.0455	.0938	.1560
2	3-7	.1397	.1203	.2115
3	8-12	.0906	.2195	.1250
4	13-16	.0528	.1667	.0625
5	17-20	.0683	.0000	.0909
6	21-24	.0749	.0000	.0909
7	25-30	.1957		.0000

APPENDIX K - PROMOTION RATES BY MILESTONE PERIOD AVERAGED ACROSS YEAR GROUPS

Table CXXVIII MILESTONE PERIOD PROMOTION RATES OF SURFACE WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE PERIOD	YEARS OF SERVICE	PROMOTION RATES				
		ETHNIC			GENDER	
		WHITE	BLACK	HISPANIC	MALE	FEMALE
1	1-2	.496	.467	.482	.492	.523
2	3-6	.339	.333	.341	.338	.469
3	7-11	.199	.175	.137	.197	.193
4	12-17	.168	.151	.111	.166	.105
5	18-20	.003	.013	.000	.004	.000
6	21-26	.268		.500	.269	
7	27-30	.034		.000	.036	

Table CXXIX MILESTONE PERIOD PROMOTION RATES OF GENERAL UNRESTRICTED LINE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE PERIOD	YEARS OF SERVICE	PROMOTION RATES				
		ETHNIC			GENDER	
		WHITE	BLACK	HISPANIC	MALE	FEMALE
1	1-2	.468	.530	.488	.516	.462
2	3-6	.334	.364	.313	.241	.380
3	7-11	.179	.150	.194	.028	.206
4	12-16	.159	.123	.111	.129	.160
5	17-20	.009	.056	.400	.000	.011
6	21-25	.193	.000	.000	.053	.271
7	26-30	.063			.000	.077

Table CXXX MILESTONE PERIOD PROMOTION RATES OF AVIATION WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE PERIOD	YEARS OF SERVICE	PROMOTION RATES				
		ETHNIC			GENDER	
		WHITE	BLACK	HISPANIC	MALE	FEMALE
1	1-2	.437	.383	.399	.433	.482
2	3-7	.473	.458	.447	.473	.498
3	8-12	.305	.291	.320	.304	.264
4	13-18	.195	.137	.152	.194	.273
5	19-25	.133	.250	.100	.133	
6	26-30	.038	.000	.000	.04	

Table CXXXI MILESTONE PERIOD PROMOTION RATES OF SUBMARINE WARFARE OFFICERS AVERAGED ACROSS YEAR GROUPS

MILESTONE PERIOD	YEARS OF SERVICE	PROMOTION RATES		
		ETHNIC		
		WHITE	BLACK	HISPANIC
1	1-2	.456	.471	.429
2	3-7	.409	.439	.393
3	8-12	.348	.148	.364
4	13-16	.256	1.00	.333
5	17-20	.003	.000	.000
6	21-24	.451	1.00	1.00
7	25-30	.020		.000

APPENDIX L - MILESTONE PERIOD LOSS RATES BY YEAR GROUPS

Table CXXXII MILESTONE PERIOD LOSS RATES OF SURFACE WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year Group	Milestone Period 1			Milestone Period 2			Milestone Period 3			Milestone Period 4			Milestone Period 5			Milestone Period 6			Milestone Period 7		
	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H
1960													135	125	200	153	125	1.00	250		
1961													143	1.00		.124			260		
1962													118	.083		153	.000				
1963													.166	.000	.000	.141	100	.000			
1964										.019	.042	.000	.119	.067	400	141	125				
1965										.022	.125		111	.000		155	.333				
1966										.037	.030	.000	098	.000	.000						
1967										.041		100	143		1.00						
1968										.046	.200	.000	134		.286						
1969							108	.152	.000	028	.000	.000	124	091	.333						
1970							119	.103	400	.031	.030		128	111							
1971							106	.100	333	.024	.045		135	.125							
1972							089	.068	.167	.033	.032	.000									
1973				251	.227	.273	078	.146	.000	.026	.077	.125									
1974				221	241	.067	.088	043	.091	.022	.019	.000									
1975	.027	.000	.286	205	.156	.100	118	.115	.222												
1976	.004	.101	.143	185	.121	.125	099	.113	.167												
1977	000	.051	.000	156	152	.104	.126	.143	.081												
1978	000	.000	.000	155	.140	.200	133	.115	.286												
1979	014	.000	.000	173	.193	.182	125	.083	.100												
1980	000	.023	.048	201	.186	.217	115	.179	.172												
1981	011	.022	.024	188	.247	.195															
1982	000	.070	.000	178	.178	.145															
1983	000	.070	.023	175	.143	.232															
1984	000	.042	.010	185	.132	.170															
1985	001	022	.058	198	.208	.176															
1986	000	.005	.000																		
1987	015	.023	000																		
1988	000	.037	.000																		
1989	002	.000	.000																		
1990																					
1991																					

W = WHITE B = BLACK H = HISPANIC

Table CXXXIII MILESTONE PERIOD LOSS RATES OF SURFACE WARFARE OFFICERS BY GENDER AND YEAR GROUP

Year Group	Milestone Period 1		Milestone Period 2		Milestone Period 3		Milestone Period 4		Milestone Period 5		Milestone Period 6		Milestone Period 7	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1960									135		154		.245	
1961									.144		.124		257	
1962									.118		151			
1963									165		.138			
1964							018		120		142			
1965							023		.111		.156			
1966							036		.097	.000				
1967							.041		.144					
1968							046		135					
1969					108		028	1.00	123					
1970					.119	.000	030	.667	128					
1971					106		026		.135					
1972					089	.000	033	.000						
1973			252		079	.000	026	1.00						
1974			221	.000	087	.143	022	.000						
1975	027	1.00	203	.000	118	.150								
1976	007	1.00	184	.100	099	.222								
1977	.000		162	.031	127	.123								
1978	.000	.000	157	074	132	.270								
1979	.014	.000	176	.085	121	.158								
1980	000	.029	202	.197	119	.069								
1981	.015	.000	.191	.082										
1982	000	.053	178	119										
1983	.000	.029	176	.167										
1984	003	.000	180	264										
1985	003	.054	199	.155										
1986	000	.000												
1987	.015	.000												
1988	.000	.017												
1989	.000	.036												
1990														
1991														

M = MALE F = FEMALE

Table CXXXIV MILESTONE PERIOD LOSS RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year Group	Milestone Period 1			Milestone Period 2			Milestone Period 3			Milestone Period 4			Milestone Period 5			Milestone Period 6			Milestone Period 7		
	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H
1960													.143		.000	.304		1.00			
1961													188			051		.333	368		
1962													.024			.194					
1963													114			.069					
1964										.068	.000		.129	.000		.275	200				
1965										.060			135		1.00	.170					
1966										048	.000		208	.000		158	200				
1967										041	.000		101	.000							
1968										065			093								
1969							088	1.00		063			160								
1970							078	000		034	.000		123	000							
1971							118	143		052	.125		136	125							
1972							062	000	.500	.023	.000										
1973				404	.391	.500	055	.048	.000	.021	.000	.000									
1974				193	.081	.200	044	.071	.000	.019	.000	.000									
1975	109	.000	.000	175	.089	.214	075	.114	.200	031	.000										
1976	103	.000	.000	216	.135	.429	096	.156													
1977	.016	.000	.143	133	.085	.182	108	.091	.000												
1978	.023	.000	.250	136	.085	.000	099	.169	.250												
1979	.000	.000	.167	121	139	.600	121	.163													
1980	.018	.000	.111	117	.025	.067	116	.123	.182												
1981	.028	.015	.071	100	053	.176															
1982	.021	.016	.000	.140	.071	.097															
1983	.074	.000	.000	142	.117	.115															
1984	007	.045	.000	136	.092	.200															
1985	.013	.012	.037	159	.113	.039															
1986	.000	023	.000																		
1987	.008	.000	.000																		
1988	.024	.000																			
1989	009	.000	.050																		
1990																					
1991																					

W = WHITE B = BLACK H = HISPANIC

Table CXXXV MILESTONE PERIOD LOSS RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY GENDER AND YEAR GROUP

Year Group	Milestone Period 1		Milestone Period 2		Milestone Period 3		Milestone Period 4		Milestone Period 5		Milestone Period 6		Milestone Period 7	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1960									.000	167	333	333		
1961									1.00	152	.222	.030	333	375
1962									.125	.077	.211	167		
1963									188	133	143	.045		
1964							214	.034	135	109	.667	167		
1965							000	155	159	.097	.269	074		
1966							063	.094	167	209	250	214		
1967							000	.064	100	094				
1968							237	044	.000	113				
1969					333	.043	389	.031	.286	152				
1970					333	.052	121	.020	105	.130				
1971					206	.113	269	.032	250	.131				
1972					139	.063	172	.010						
1973			668	.195	195	045	053	.025						
1974			326	.152	271	.024	071	.026						
1975	228	.027	321	.121	207	062	000	.031						
1976	058	137	295	.138	229	061								
1977	000	.044	171	.120	285	070								
1978	000	059	180	.130	267	.068								
1979	000	040	203	.088	265	098								
1980	016	.020	172	.097	192	104								
1981	000	.033	142	.101										
1982	053	.021	317	104										
1983	143	.042	279	.109										
1984	000	.026	307	.090										
1985	000	.033	323	.106										
1986	000	.011												
1987	000	.030												
1988	050	.011												
1989	088	.007												
1990														
1991														

M = MALE F = FEMALE

Table CXXXVI MILESTONE PERIOD LOSS RATES OF AVIATION WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year Group	Milestone Period 1			Milestone Period 2			Milestone Period 3			Milestone Period 4			Milestone Period 5			Milestone Period 6		
	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H
1960													.161			.250		
1961													.132	.000	.000	.235	.000	1.00
1962													.140					
1963										049	000	000	.137	.500	.267			
1964										031	.000	000	.177	.063	.000			
1965										.037	.040	.000	166	400	.250			
1966										026	.143	.071	173	.000	.250			
1967										020	.000	.000						
1968							101	.143	.286	029	.167	.000						
1969							105	.000	200	.020	.000	.500						
1970							107	182	.222	.028	.000	.250						
1971							105	.045	143	027	.050	.000						
1972							062	150	273	043	000	.000						
1973				131	.138	.133	.036	.085	.000	030	095	.063						
1974				.095	.110	.114	.058	.043	000									
1975	113	400	429	088	.054	.118	.093	.036	.100									
1976	186	.279	.600	057	.047	.000	106	.100	.000									
1977	.089	.129	.308	.054	.090	.050	136	.167	.190									
1978	.046	.173	.400	.071	.099	.000	122	.135	.167									
1979	.045	.240	.091	.078	.047	.087	115	.145	.053									
1980	.067	.125	.087	.073	.037	.040												
1981	.075	111	.073	.086	.110	.072												
1982	.090	.106	273	.069	.096	.057												
1983	.080	102	.057	.059	.078	.066												
1984	.051	.151	.100	.057	.072	.113												
1985	.051	.222	.042															
1986	.072	173	.129															
1987	.039	173	.087															
1988	.033	.032	.051															
1989	.051	.094	.133															
1990																		
1991																		

W = WHITE B = BLACK H = HISPANIC

Table CXXXVII MILESTONE PERIOD LOSS RATES OF AVIATION WARFARE OFFICERS BY GENDER AND YEAR GROUP

Year Group	Milestone Period 1		Milestone Period 2		Milestone Period 3		Milestone Period 4		Milestone Period 5		Milestone Period 6	
	M	F	M	F	M	F	M	F	M	F	M	F
1960									162		.286	
1961									128		207	
1962									140			
1963							.047		139			
1964							.030		177			
1965							.036		168			
1966							.027		173			
1967							.020					
1968					102		.029					
1969					104		.021					
1970					108	.250	.029					
1971					105		.027					
1972					062		.043					
1973			132	.056	038	.038	.031	.095				
1974			095		057							
1975	126	.000	088	.087	092	.077						
1976	191	.250	057	.111	106	.111						
1977	095	000	054	.119	136	.250						
1978	051	.000	072	.053	122	117						
1979	.052	.000	076	.068	114	.225						
1980	.071	.000	072	.054								
1981	077	.029	085	.035								
1982	093	.071	070	.076								
1983	081	.030	060	.034								
1984	054	102	059	.109								
1985	058	000										
1986	078	025										
1987	045	096										
1988	034	.026										
1989	057	.075										
1990												
1991												

M = MALE F = FEMALE

Table CXXXVIII MILESTONE PERIOD LOSS RATES OF SUBMARINE WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year Group	Milestone Period 1			Milestone Period 2			Milestone Period 3			Milestone Period 4			Milestone Period 5			Milestone Period 6			Milestone Period 7		
	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H
1960													.082			.068			.221		
1961													.088			.072			.168		.000
1962													.095			.074					
1963										.046			056			.084					
1964										034			.065			.092					
1965										.025			.042			040					
1966										045	.000	.000	055	.000	.000	103	.000	.000			
1967										101			.053			061					
1968							118	.250	1.00	.043			066								
1969							.091	.125	.000	071	500	000	086	.000	333						
1970							100	1.00		.044			061								
1971							103		125	.070		.125	.041		.000						
1972							.079			056											
1973				139	.000	.111	.085	.000	200	053	.500										
1974				138			.050			037											
1975	.009	.000	1.00	155	.200		.083	.000		052	.000										
1976	137	.053	.000	143	.152	143	.063	.267	.000												
1977	.029	.111	.000	119	.105	.500	.110	.375													
1978	038	080		130	.065		.120	.172													
1979	036	.000	1.00	122	.095		079	429													
1980	034	.050	.000	149	167	.222															
1981	.043	143	455	149	.167	.308															
1982	055	.077	.091	147	.125	.043															
1983	.037	182	.048	133	.063	.320															
1984	041	.200	.286	155	.125	.250															
1985	063	200	.077																		
1986	041	.333	.000																		
1987	.020	167	.100																		
1988	.030	.000	.118																		
1989	061	.000	.190																		
1990																					
1991																					

W = WHITE B = BLACK H = HISPANIC

APPENDIX M - MILESTONE PERIOD PROMOTION RATES BY YEAR GROUPS

Table CXXXIX MILESTONE PERIOD PROMOTION RATES OF SURFACE WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year Group	Milestone Period 1			Milestone Period 2			Milestone Period 3			Milestone Period 4			Milestone Period 5			Milestone Period 6			Milestone Period 7		
	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H
1960													.000	.000	.000	240	1.00	.000	.044	.000	.000
1961													.000	000	.000	326	.000	000	028	.000	000
1962													.001	.000	.000	237	600	.000			
1963													.000	000	.000	283	1.00	500			
1964										.162	.235	.100	.000	000	.000	.269	333	.000			
1965										.178	.143	.000	.004	.000	.000	.266	.000	.000			
1966										.220	.250	250	.002	.000	.000						
1967										.164	.000	.125	.009	.000	.000						
1968										.184	.000	.154	.000	000	000						
1969							211	148	.250	.185	.100	.000	.005	.000	.000						
1970							196	.207	.000	.169	.167	.000	012	.067	.000						
1971							.230	238	.000	.155	.200	000	.004	.000	.000						
1972							247	250	.250	.144	146	.000									
1973				.305	281	.286	.253	.194	.333	.154	042	.167									
1974				.352	.300	.500	.243	.281	.286	.142	.152	.100									
1975	547	.600	429	.345	.367	.333	.203	.218	.125												
1976	.526	.417	800	.365	419	.500	212	.163	.250												
1977	545	.497	.591	.395	.381	.345	.176	.135	.133												
1978	.526	.511	.714	.373	.362	.333	.161	.157	.000												
1979	500	508	.500	.338	.268	286	.156	213	.125												
1980	511	.470	.500	.294	.290	.324	.162	.103	.097												
1981	.503	.493	.561	.331	.267	.422															
1982	.505	.481	.513	.339	.325	.390															
1983	.520	439	483	.334	.348	.267															
1984	.532	.486	.505	.353	.403	.356															
1985	.512	.485	463	.304	.295	.322															
1986	212	.263	257																		
1987	.506	509	.520																		
1988	.513	466	.536																		
1989	.512	490	520																		
1990																					
1991																					

W = WHITE B = BLACK H = HISPANIC

Table CXL MILESTONE PERIOD PROMOTION RATES OF SURFACE WARFARE OFFICERS BY GENDER AND YEAR GROUP

Year Group	Milestone Period 1		Milestone Period 2		Milestone Period 3		Milestone Period 4		Milestone Period 5		Milestone Period 6		Milestone Period 7	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1960									.000		.240		.048	
1961									.003		.326		028	
1962									.004		.240			
1963									.000		.292			
1964							162		.000		267			
1965							.169		.004		263			
1966							222		.002	.000				
1967							164		.009					
1968							187	000	.000					
1969					211		183		.007					
1970					197	.000	167		.014					
1971					230		155	000	.004					
1972					247	.500	144							
1973			304		252	.333	151							
1974			351		244	.333	140	250						
1975	548	.000	.345		203	.059								
1976	521	.000	366	2.00	208	273								
1977	541		388	.846	171	191								
1978	520	2.80	.368	.588	158	.194								
1979	496	.920	.333	.477	158	.163								
1980	507	543	293	.351	157	.208								
1981	498	.645	.329	.425										
1982	504	447	338	.424										
1983	513	486	331	.400										
1984	525	.563	357	.314										
1985	508	460	303	.382										
1986	217	200												
1987	507	.563												
1988	512	492												
1989	513	470												
1990														
1991														

M = MALE F = FEMALE

Table CXLI MILESTONE PERIOD PROMOTION RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year Group	Milestone Period 1			Milestone Period 2			Milestone Period 3			Milestone Period 4			Milestone Period 5			Milestone Period 6			Milestone Period 7		
	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H
1960													.000			.286					
1961													.000			.333		.000	063		
1962													.000			200					
1963													.000			267					
1964										.216			000	.000		154	.000				
1965										.230	.333		000		.000	.083					
1966										.268	.333		.000	.000		182	000				
1967										.172	333		.039	.333							
1968										173	.000		000								
1969							217	.000		.220			.009								
1970							203	333		.131	.250		023	.000							
1971							230	.200		161	.100		.000	.000							
1972							246	375	000	.114	.059										
1973				192	.244	.167	256	.296	.333	.138	.160	.000									
1974				295	.381	.333	236	.182	.333	.167	.050	.250									
1975	447	478	.571	.342	.259	.222	212	.261	.333	.150	.111										
1976	470	.917	.500	.220	.240	.250	187	.111													
1977	517	.611	.571	.346	.338	.286	166	.169	.333												
1978	458	.538	250	.353	442	.500	168	.070	.000												
1979	503	.759	.500	.366	.356	.000	130	.108													
1980	472	.568	.444	.392	.404	.444	141	.108	.111												
1981	466	.507	429	431	478	.273															
1982	485	492	471	.361	.458	.333															
1983	453	.516	.538	.363	.319	.313															
1984	503	.507	.625	335	.371	.214															
1985	485	.506	.519	320	.333	444															
1986	.257	.295	400																		
1987	463	636	.667																		
1988	486	.591																			
1989	508	.500	450																		
1990																					
1991																					

W = WHITE B = BLACK H = HISPANIC

Table CXLII MILESTONE PERIOD PROMOTION RATES OF GENERAL UNRESTRICTED LINE OFFICERS BY GENDER AND YEAR GROUP

Year Group	Milestone Period 1		Milestone Period 2		Milestone Period 3		Milestone Period 4		Milestone Period 5		Milestone Period 6		Milestone Period 7	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1960									.000	.000	000	667		
1961									.000	000	000	462	000	.077
1962									.000	000	100	429		
1963									.000	.000	100	250		
1964							400	171	.000	000	143	125		
1965							214	245	.000	000	000	231		
1966							400	235	.000	000	125	100		
1967							240	.167	000	.061				
1968							125	186	.000	000				
1969					024	.273	200	.213	.000	.010				
1970					065	.225	032	.150	000	.024				
1971					107	.245	.040	.179		.000				
1972					115	.272	000	127						
1973			065	.346	041	276	.111	140						
1974			189	.370	047	.257	077	162						
1975	.386	484	254	.387	081	.244	.080	152						
1976	549	431	.148	.301	.030	.245								
1977	705	481	359	.335	007	207								
1978	597	.433	418	.341	000	.203								
1979	.729	463	.324	.384	007	.152								
1980	452	478	407	.391	026	.156								
1981	514	467	475	421										
1982	558	477	.238	407										
1983	429	469	288	.384										
1984	611	.479	166	.418										
1985	583	.469	184	.392										
1986	228	278												
1987	466	485												
1988	500	491												
1989	509	.503												
1990														
1991														

M = MALE F = FEMALE

Table CXLIII MILESTONE PERIOD PROMOTION RATES OF AVIATION WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year Group	Milestone Period 1			Milestone Period 2			Milestone Period 3			Milestone Period 4			Milestone Period 5			Milestone Period 6		
	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H
1960													.131			.036		
1961													.176	333	.333	.039	.000	.000
1962													.129					
1963										.181	.000	.111	.147		111			
1964										158	.111	.333	.126	.333	.333			
1965										.154	.045	100	.109	000	.000			
1966										.218	.250	.333	129	.333	.000			
1967										232	267	.500						
1968							.277	250		226	.333	.143						
1969							294	.500	.222	242	.333	.000						
1970							307	.125	.167	190	.000	.000						
1971							331	.333	.250	206	.000	.333						
1972							378	.182	.286	167	.333	.000						
1973				436	.457	400	.397	.359	.500	.164	167	.077						
1974				477	.600	.500	404	.450	.500									
1975	477	.298	.308	495	.516	.571	.329	.370	.500									
1976	415	.367	.100	495	.477	.500	332	.389	.400									
1977	485	441	.391	509	.444	471	252	.200	.333									
1978	464	.385	200	479	.500	.500	235	.216	.000									
1979	470	.320	.545	481	.500	.364	218	.205	.333									
1980	454	411	435	465	.478	.500												
1981	448	400	436	452	.413	.469												
1982	436	409	.303	472	.481	478												
1983	439	407	477	464	.415	.415												
1984	464	.395	429	469	.378	441												
1985	462	.317	.465															
1986	214	.259	241															
1987	472	407	452															
1988	475	468	449															
1989	453	.406	.385															
1990																		
1991																		

W = WHITE B = BLACK H = HISPANIC

Table CXLIV MILESTONE PERIOD PROMOTION RATES OF AVIATION WARFARE OFFICERS BY GENDER AND YEAR GROUP

Year Group	Milestone Period 1		Milestone Period 2		Milestone Period 3		Milestone Period 4		Milestone Period 5		Milestone Period 6	
	M	F	M	F	M	F	M	F	M	F	M	F
1960									.130		040	
1961									179		035	
1962									129			
1963							.180		145			
1964							.157		128			
1965							153		108			
1966							218		.127			
1967							.233					
1968					275		.226					
1969					294		.241					
1970					306	500	189					
1971					331		203					
1972					374		167					
1973			436	467	394	455	.163	.273				
1974			478		406							
1975	470	.714	496	.500	331	.286						
1976	412	.750	495	444	333	.500						
1977	482	.750	507	.526	251	.167						
1978	460	833	478	.654	234	.250						
1979	465	.586	481	.528	218	.200						
1980	451	.613	465	.500								
1981	446	486	451	500								
1982	433	.446	471	.490								
1983	436	.545	462	.447								
1984	460	469	466	444								
1985	457	.608										
1986	215	.177										
1987	468	.521										
1988	474	.481										
1989	448	.434										
1990												
1991												

M = MALE F = FEMALE

Table CXLV MILESTONE PERIOD PROMOTION RATES OF SUBMARINE WARFARE OFFICERS BY ETHNIC GROUP AND YEAR GROUP

Year Group	Milestone Period 1			2			3			4			5			6			7		
	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H	W	B	H
1960													.003			.357			.025		
1961													.000			602			.015		.000
1962													.000			404					
1963										258			.000			528					
1964										256			000			488					
1965										276			012			517					
1966										.298	500	333	.004	.000	.000	357	1.00	1.00			
1967										258			008			446					
1968							333	.500	.000	.308			000								
1969							349	.500	.333	283		.333	.004	.000	.000						
1970							339	.000		247			.004								
1971							408		.333	249		.333	.004		.000						
1972							419			211											
1973				462	.500	.500	358	.500	.500	233	.000										
1974				487			430			229	333										
1975	.507	500	.000	429	.429		.387	.500		257											
1976	433	.563	.667	415	.533	.667	425	.077	.500												
1977	497	.444	.500	425	.625	.000	444	.000													
1978	471	.440		392	.429		228	.136													
1979	.507	833	.000	410	.364		250	.000													
1980	483	.500	1.00	371	.381	500															
1981	472	429	.364	388	.333	.375															
1982	459	462	455	401	.417	.500															
1983	474	.364	476	.391	.429	.235															
1984	474	.400	.357	.393	.500	.444															
1985	451	400	.462																		
1986	.193	.333	.500																		
1987	503	417	400																		
1988	480	500	412																		
1989	460	.500	.381																		
1990																					
1991																					

W = WHITE B = BLACK H = HISPANIC

APPENDIX N - SUPPORTING GRAPHS FOR THE SURFACE WARFARE COMMUNITY

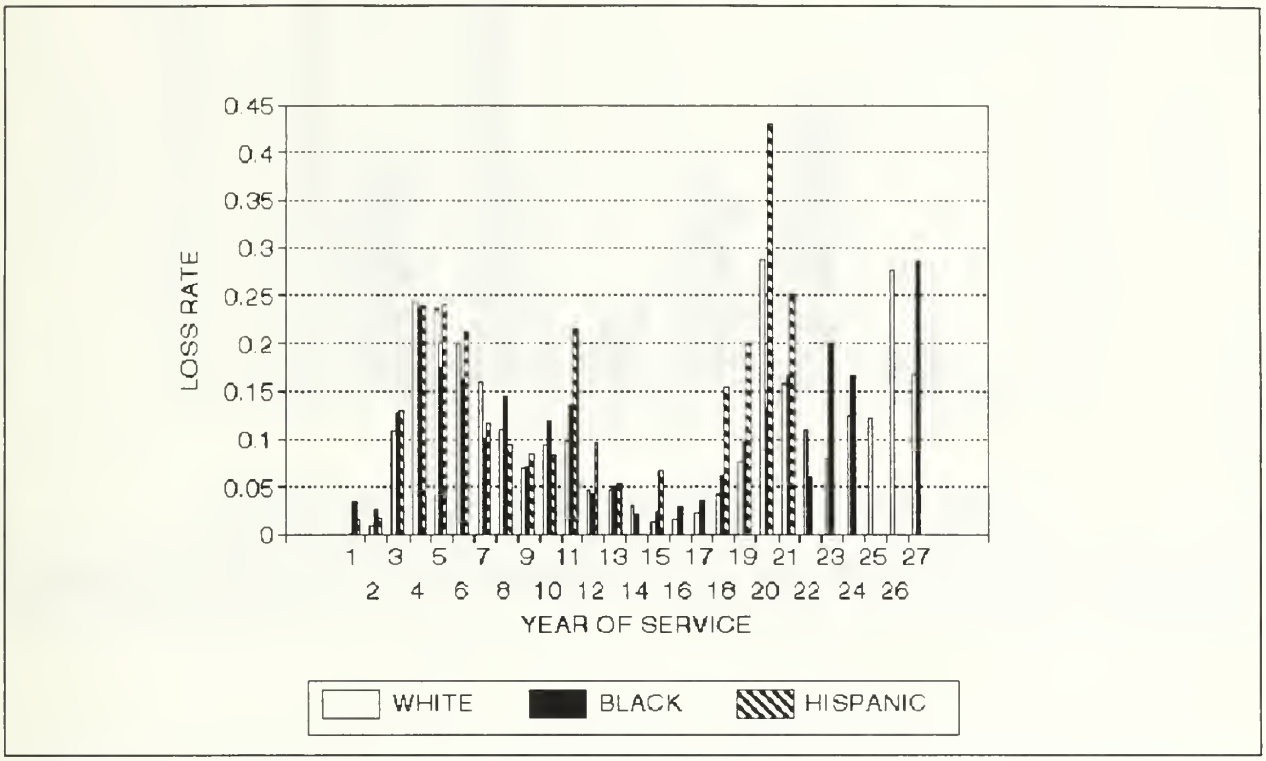

Figure 3 Loss Rates of Surface Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups

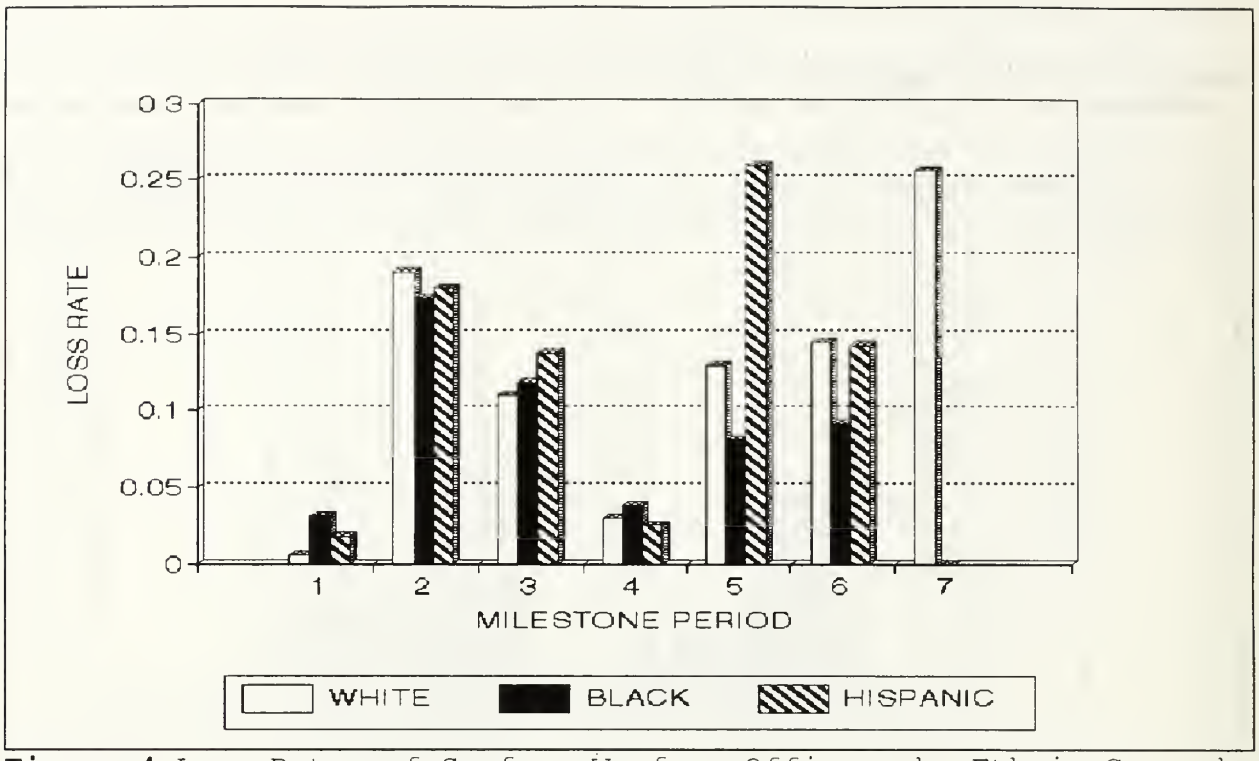

Figure 4 Loss Rates of Surface Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups

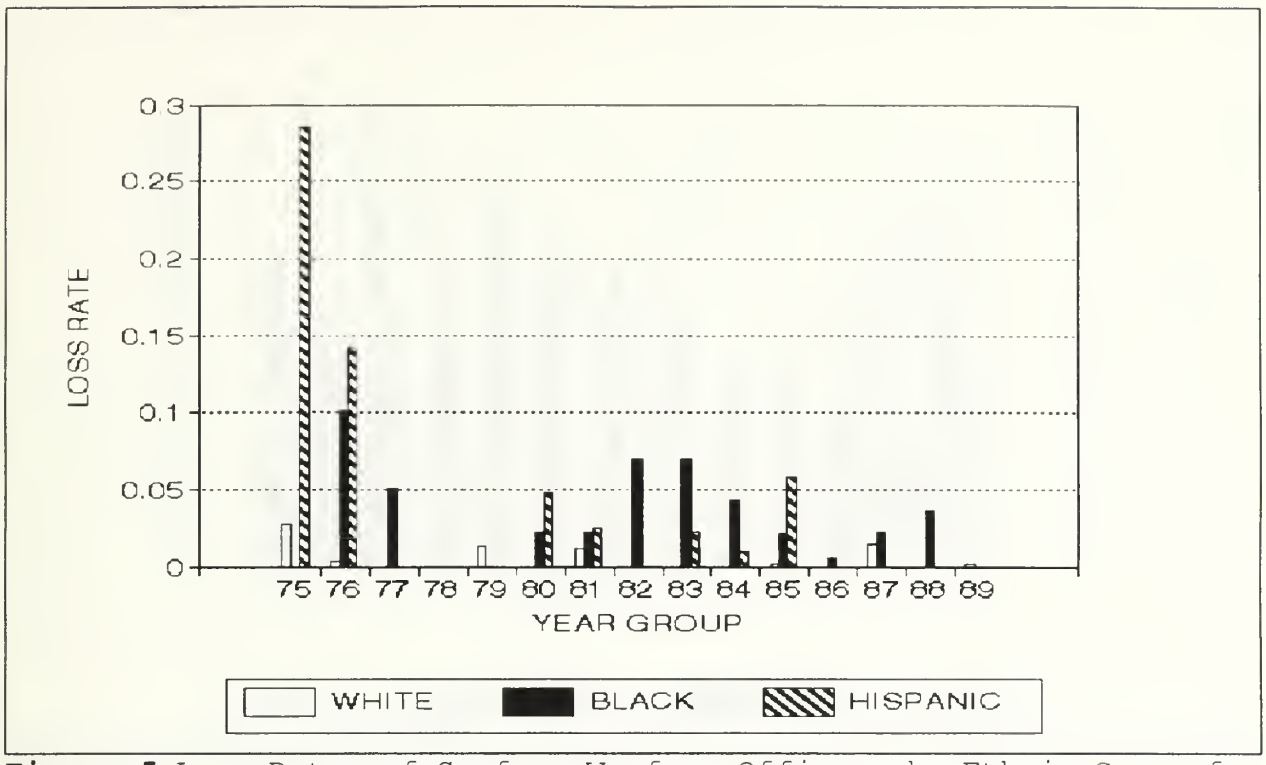

Figure 5 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 1

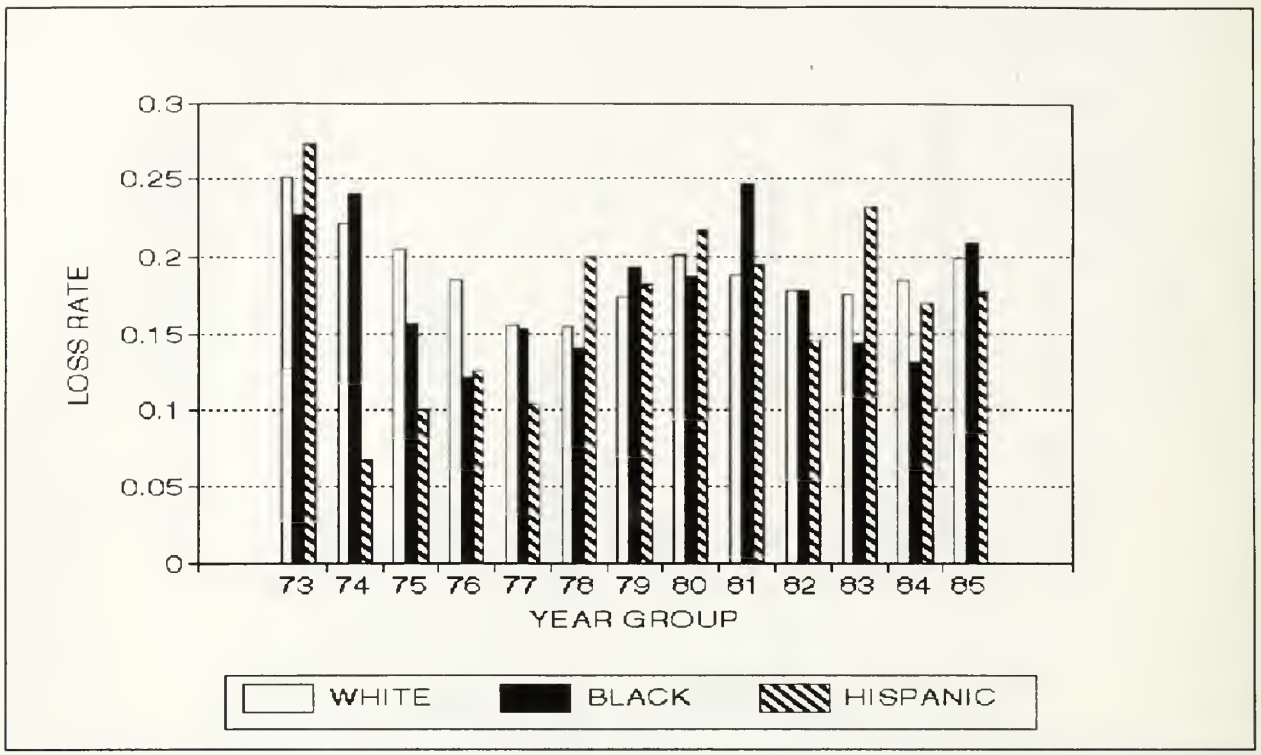

Figure 6 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 2

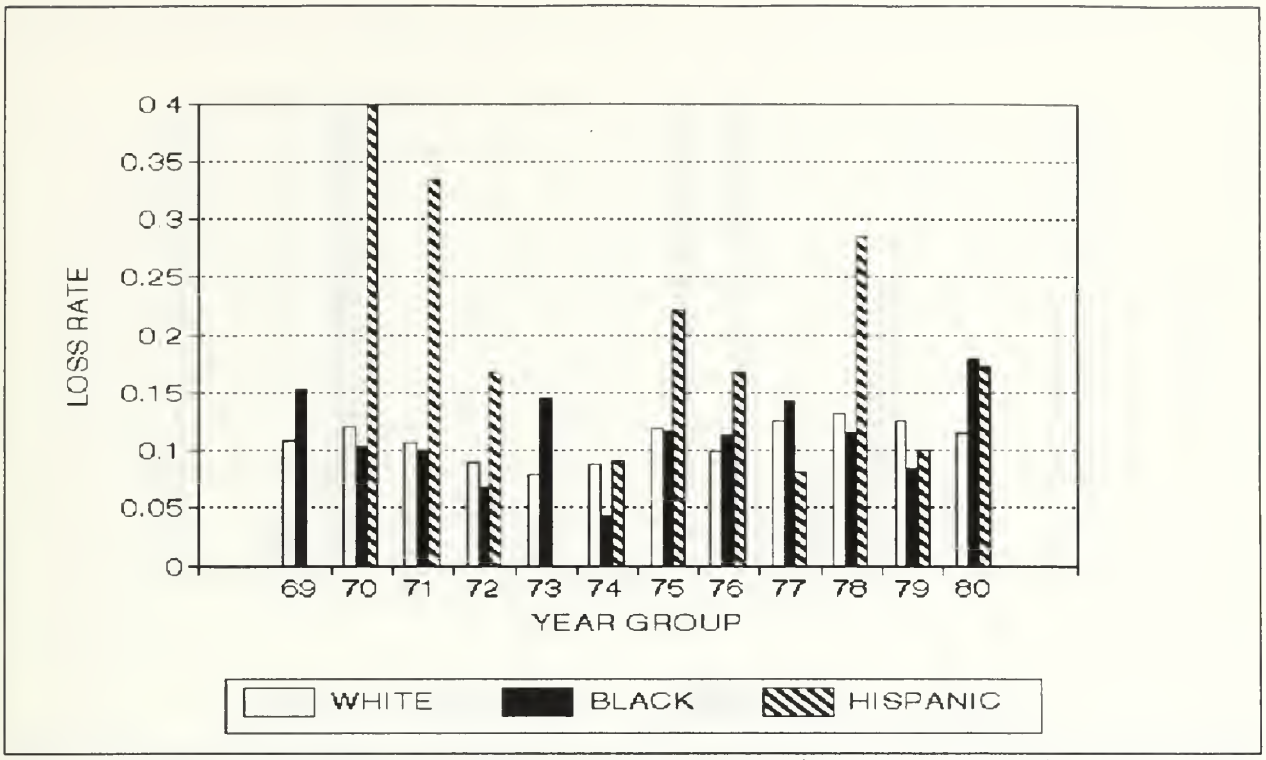

Figure 7 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 3

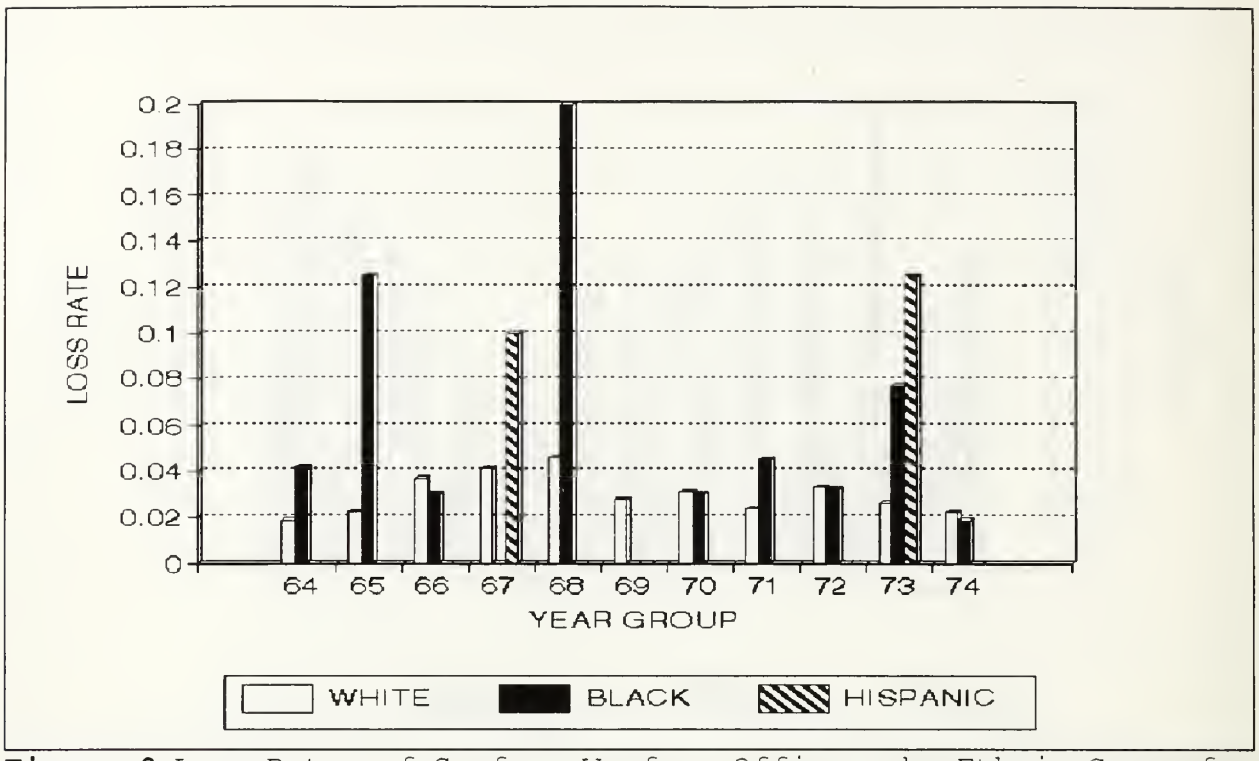

Figure 8 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 4

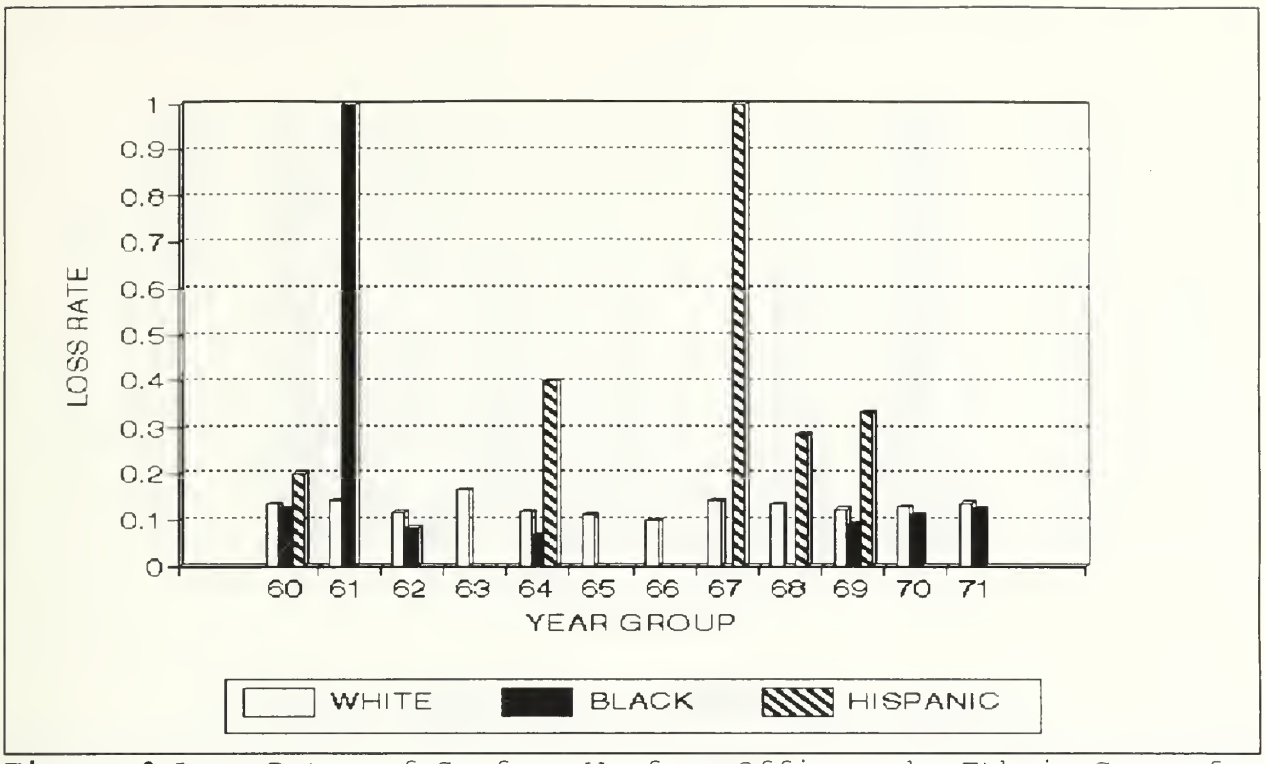

Figure 9 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 5

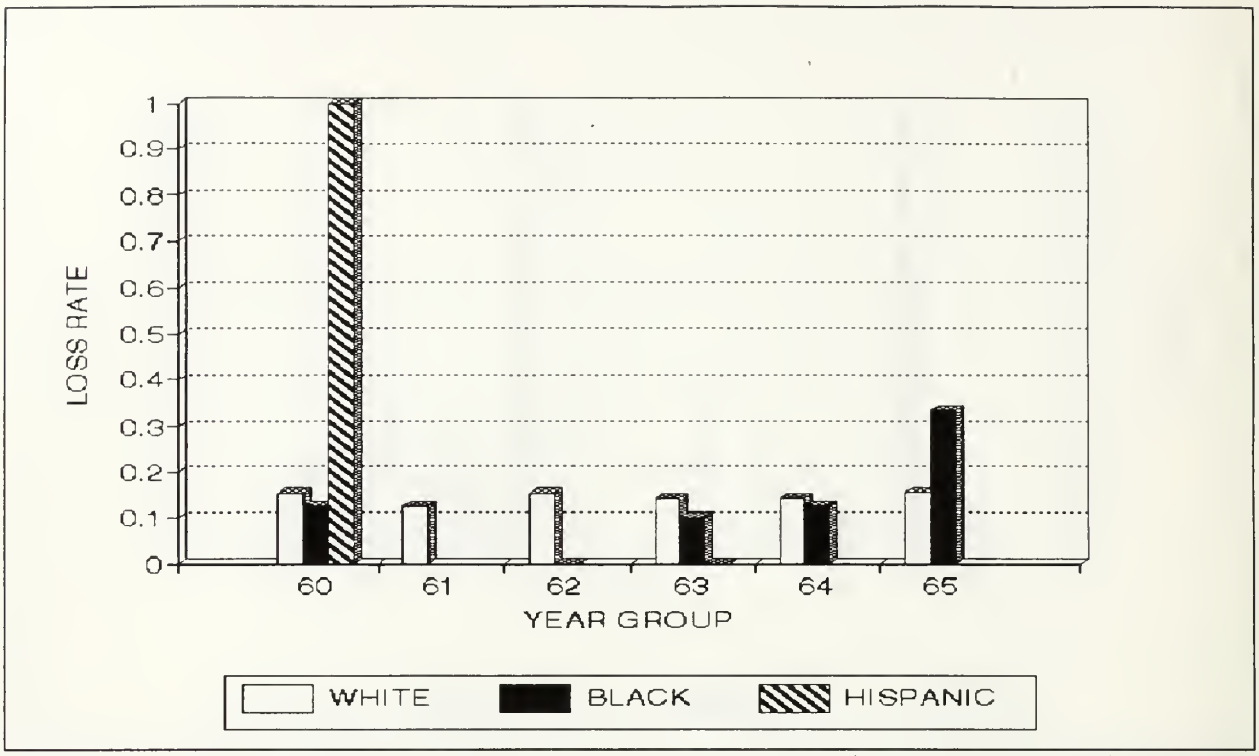

Figure 10 Loss Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 6

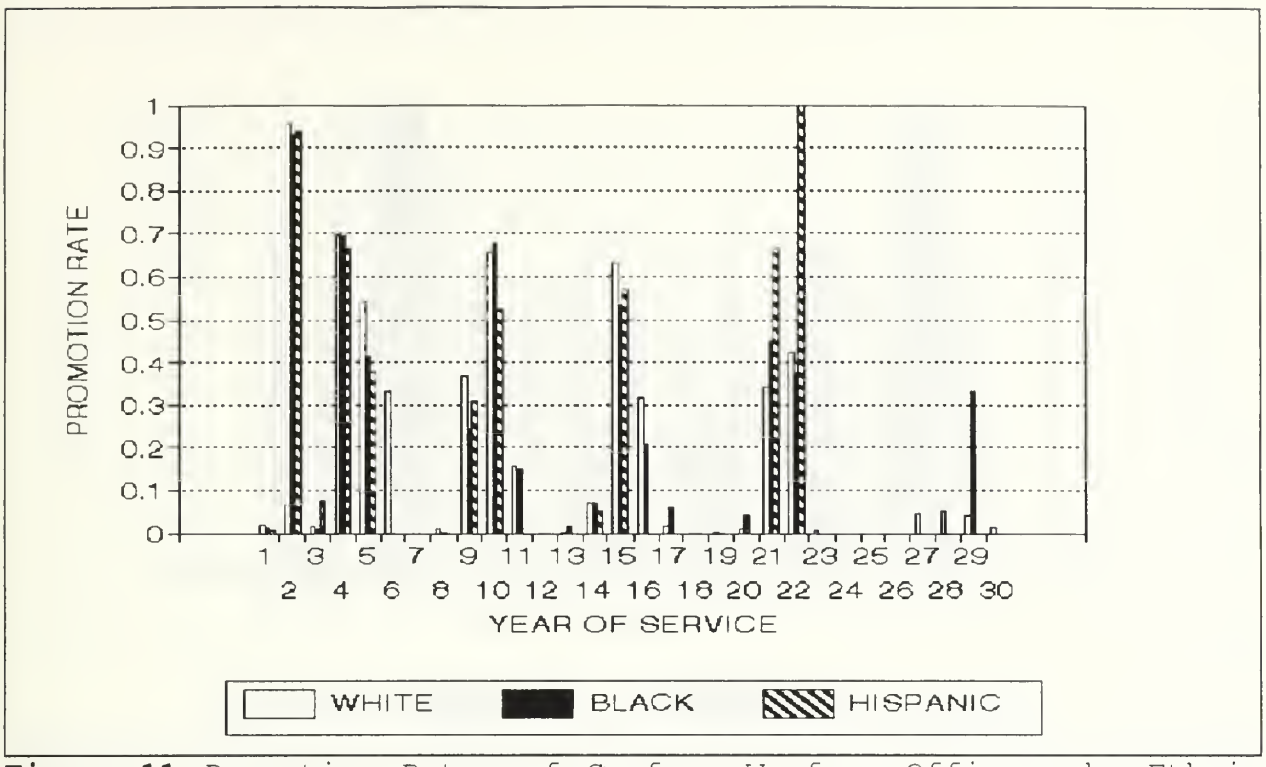

Figure 11 Promotion Rates of Surface Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups

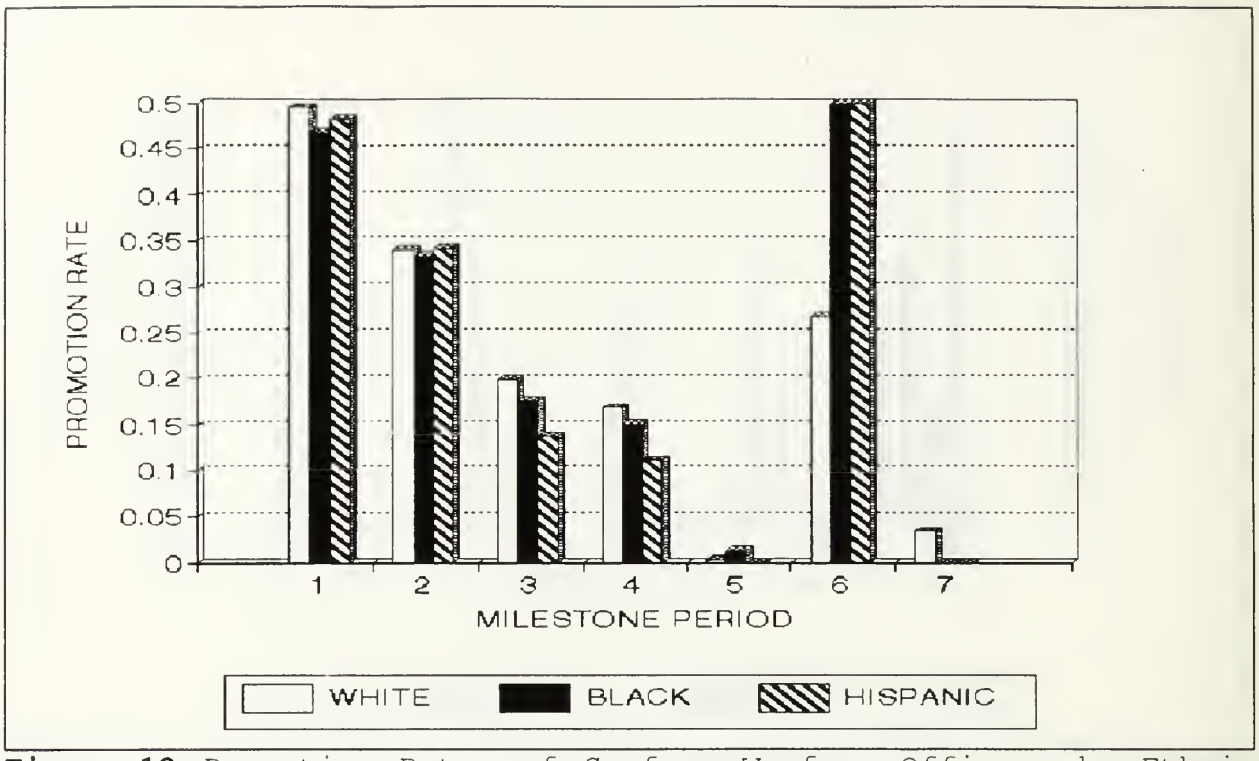

Figure 12 Promotion Rates of Surface Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups

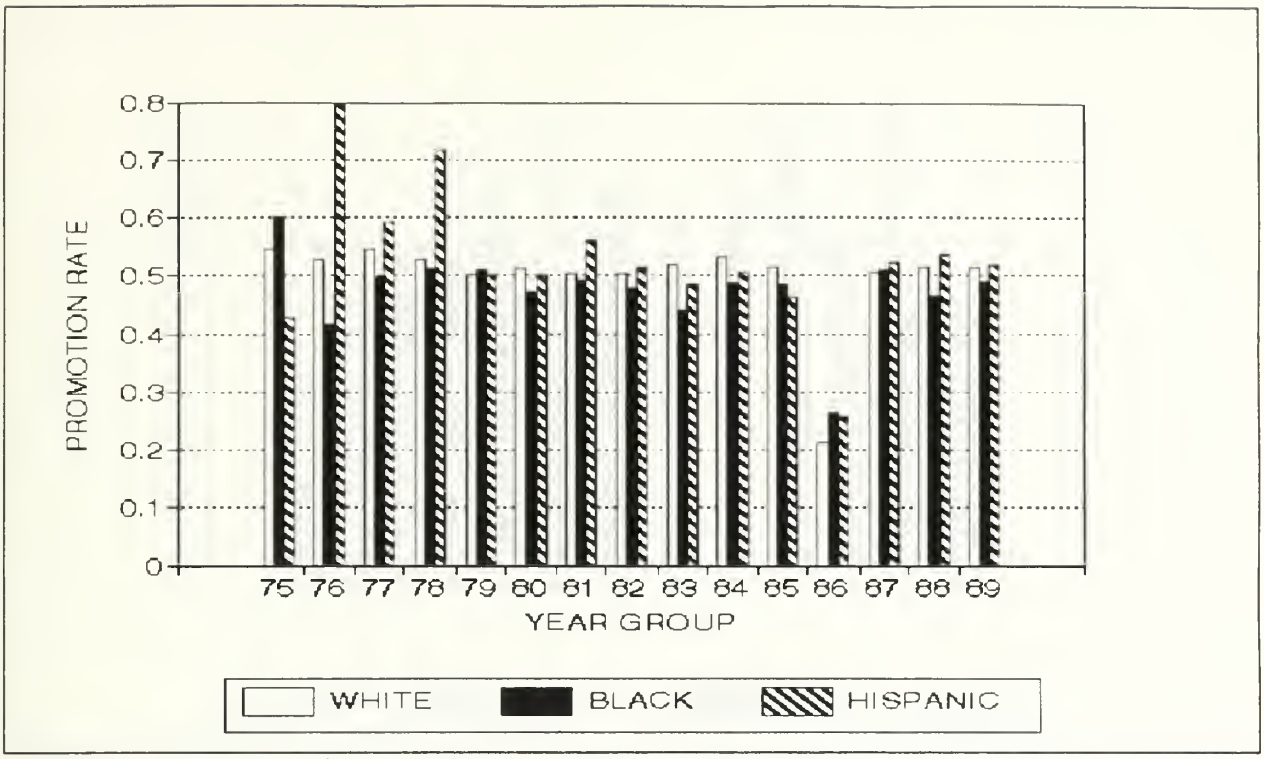

Figure 13 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 1

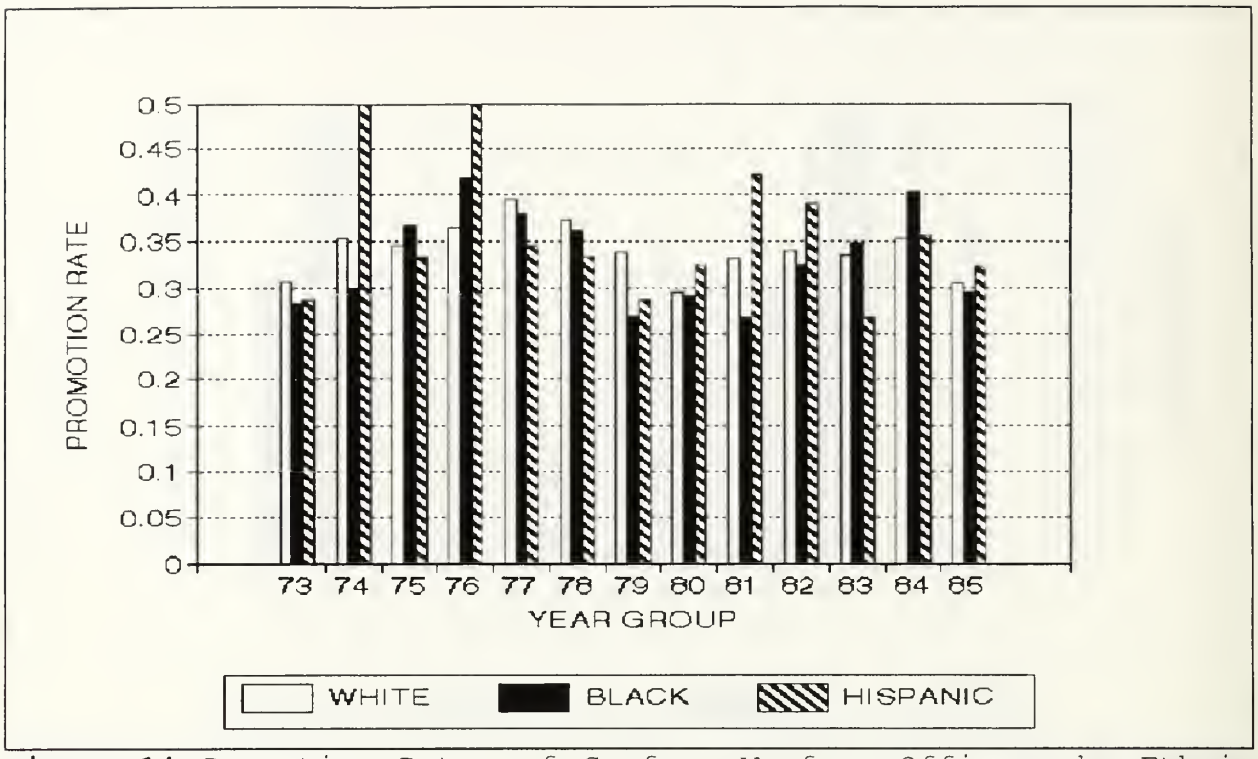

Figure 14 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 2

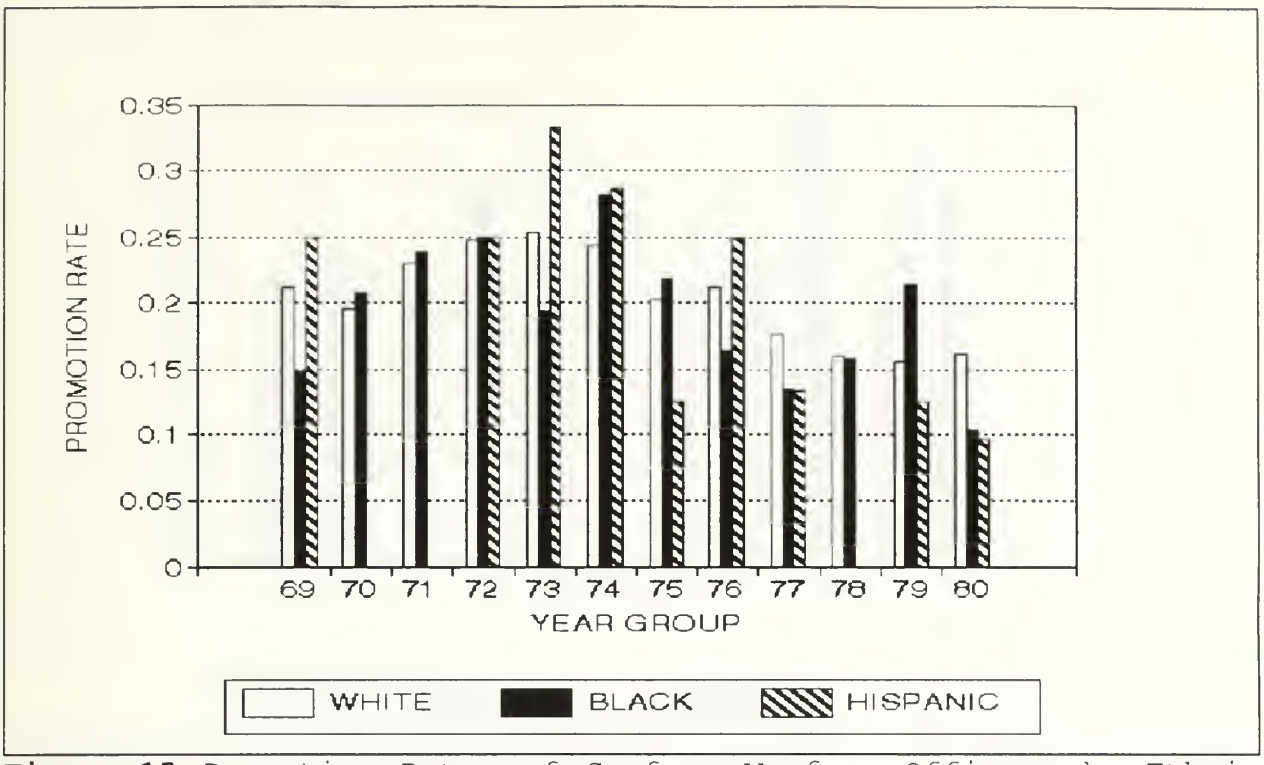

Figure 15 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 3

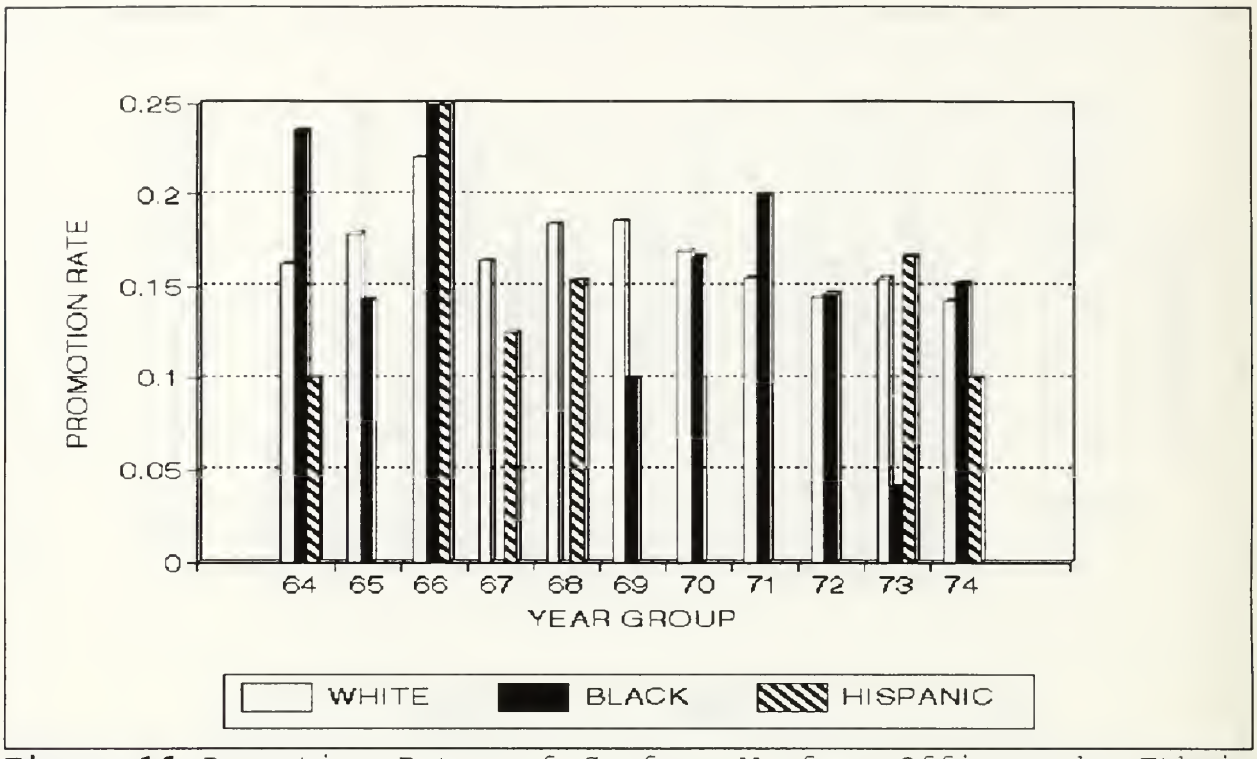

Figure 16 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 4

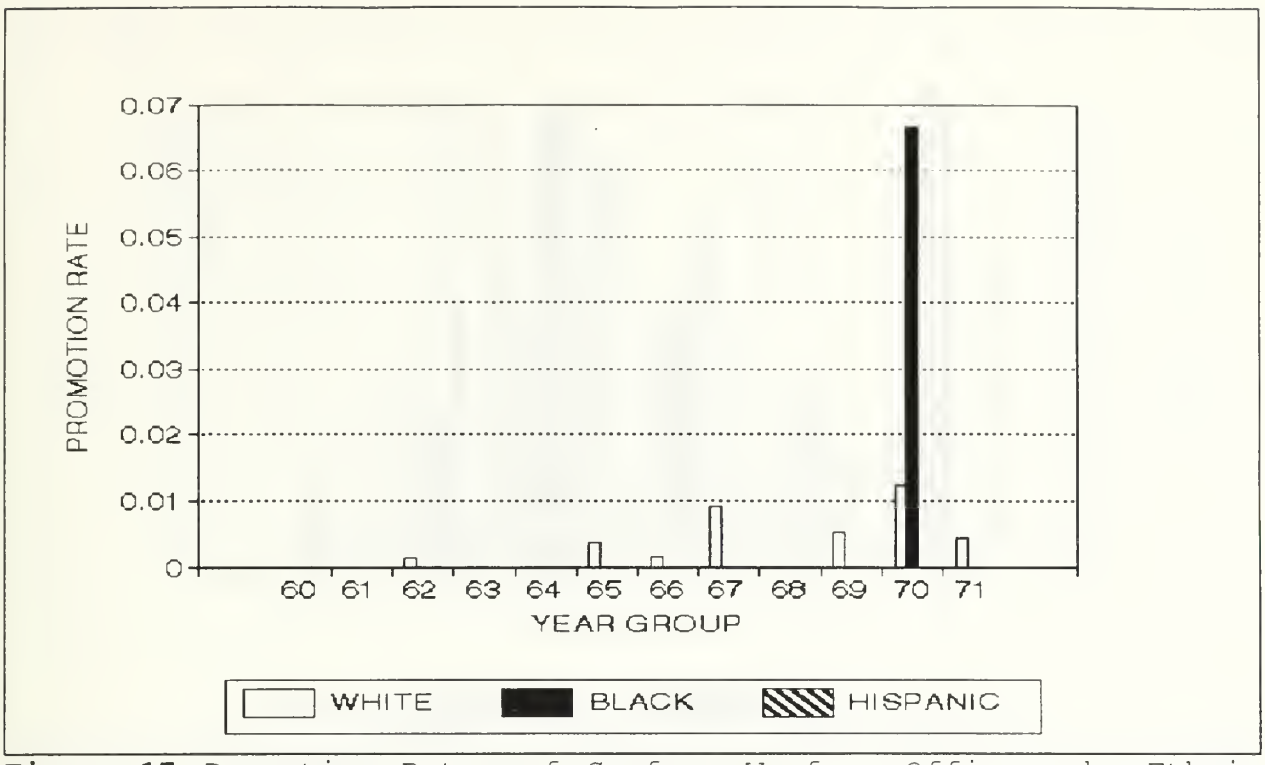

Figure 17 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 5

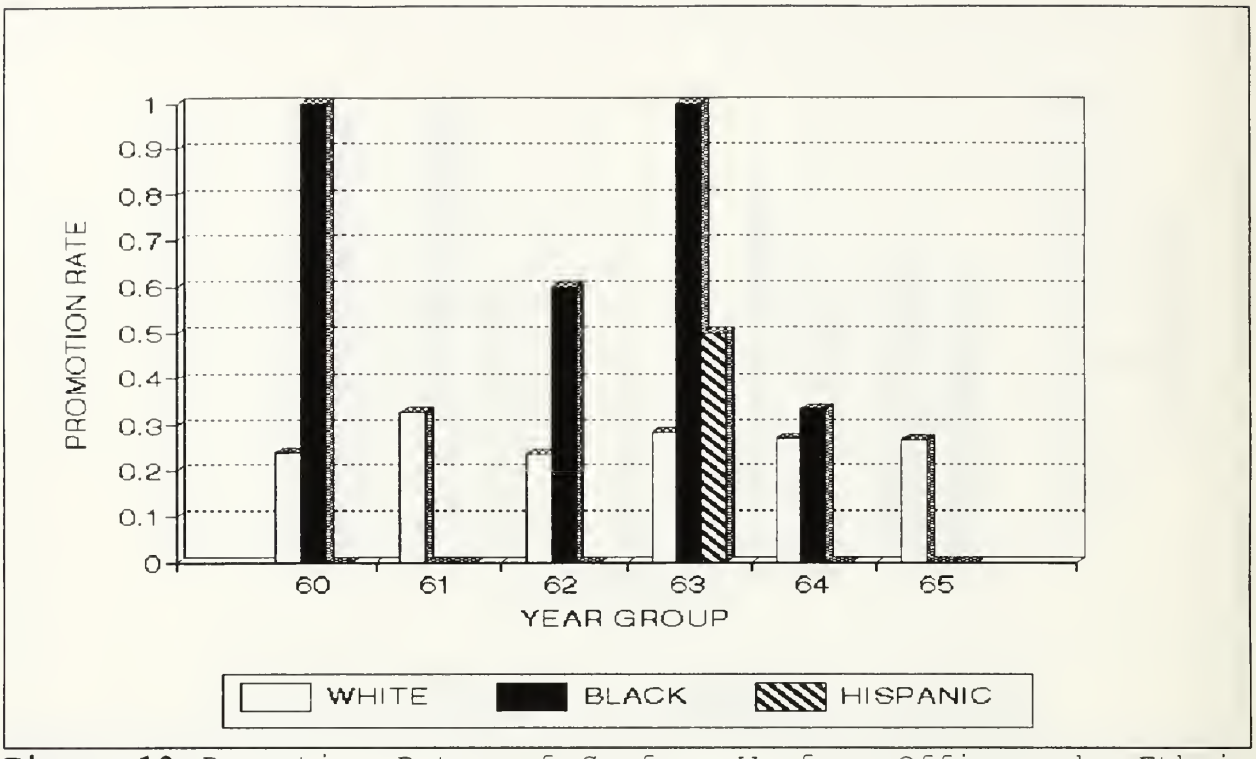

Figure 18 Promotion Rates of Surface Warfare Officers by Ethnic Group for Milestone Period 6

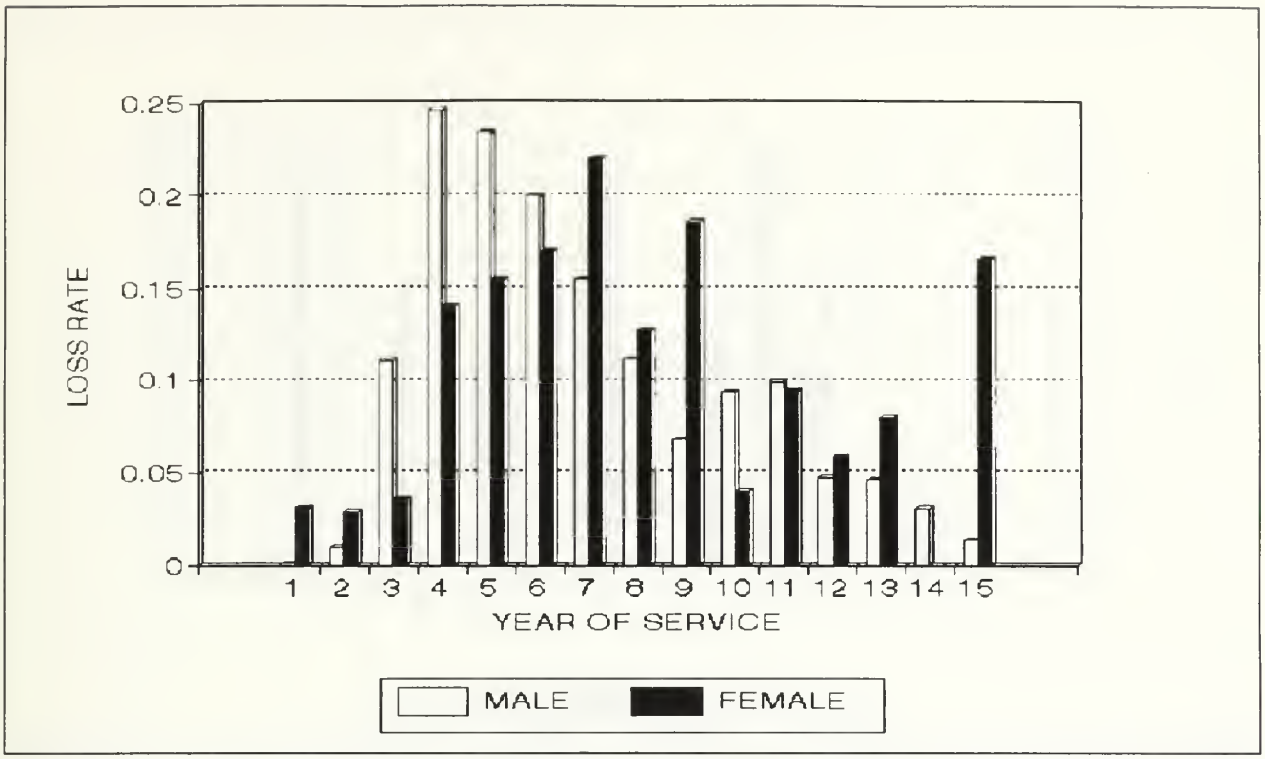

Figure 19 Loss Rates of Surface Warfare Officers by Gender by Year of Service Averaged Across Year Groups

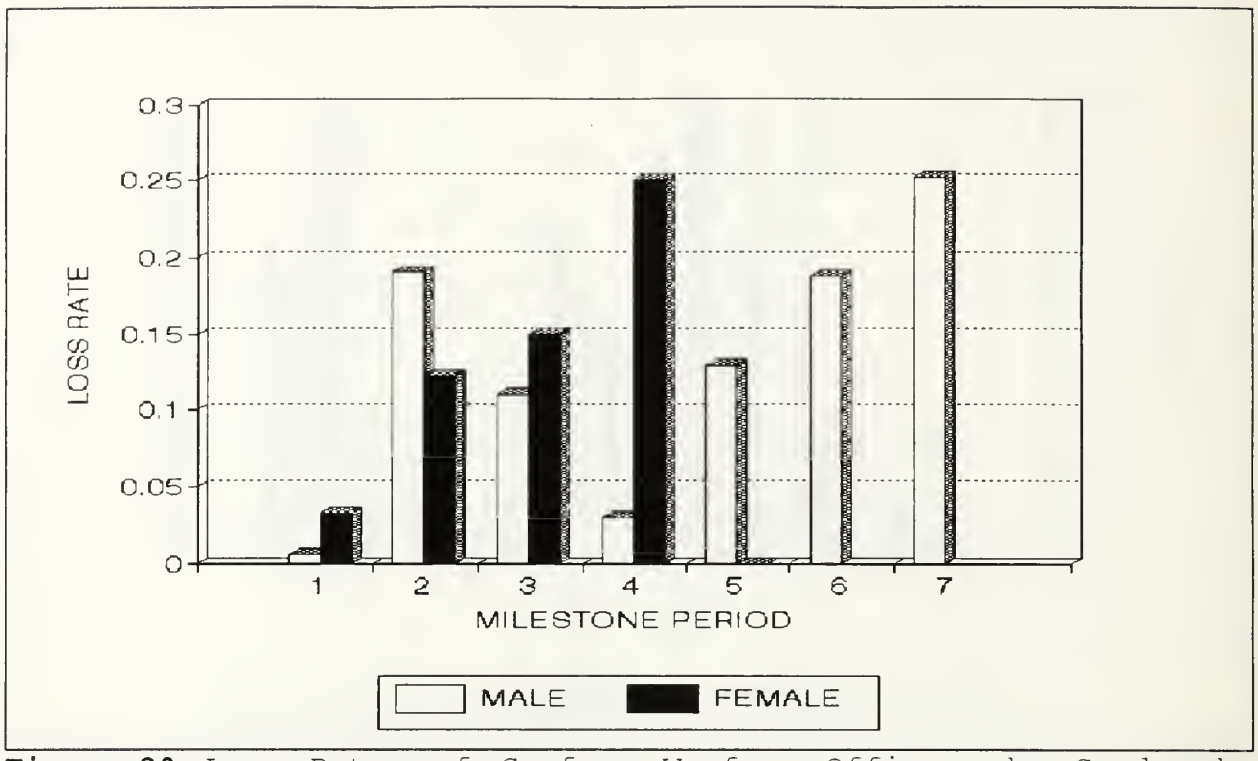

Figure 20 Loss Rates of Surface Warfare Officers by Gender by Milestone Period Averaged Across Year Groups

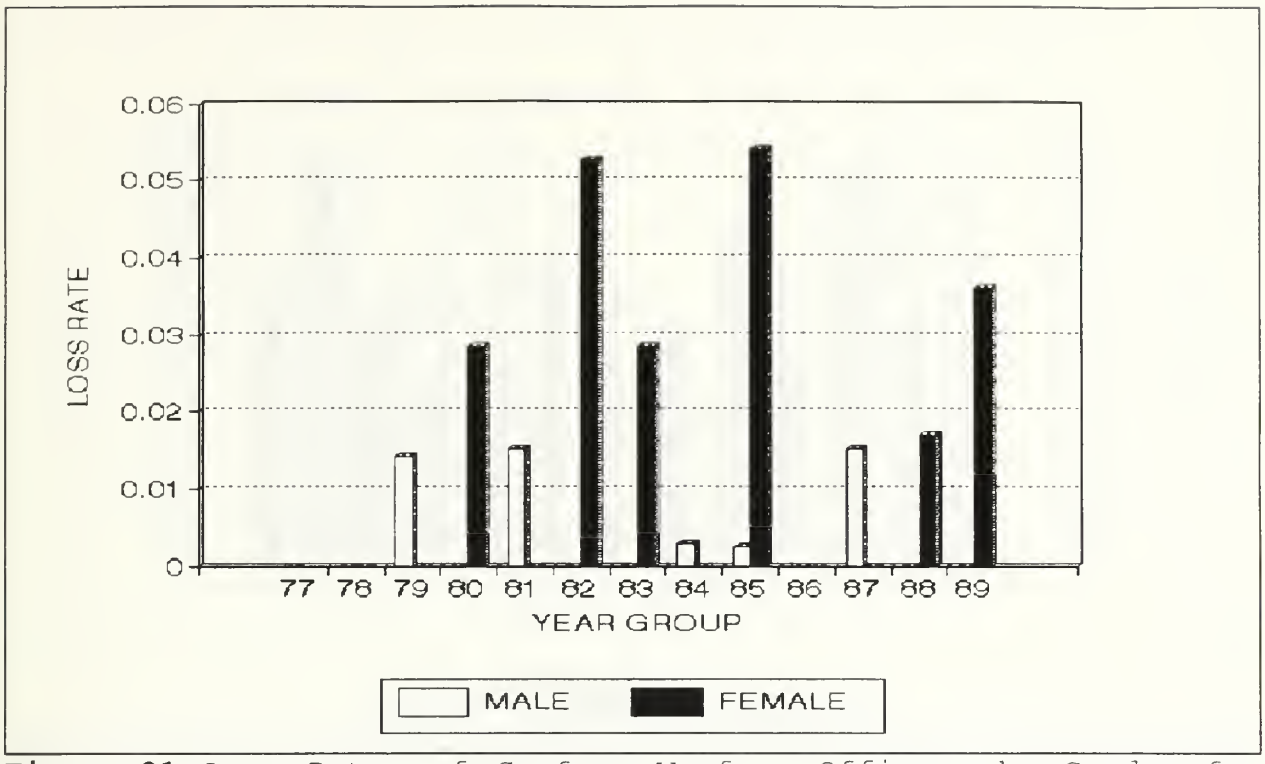

Figure 21 Loss Rates of Surface Warfare Officers by Gender for Milestone Period 1

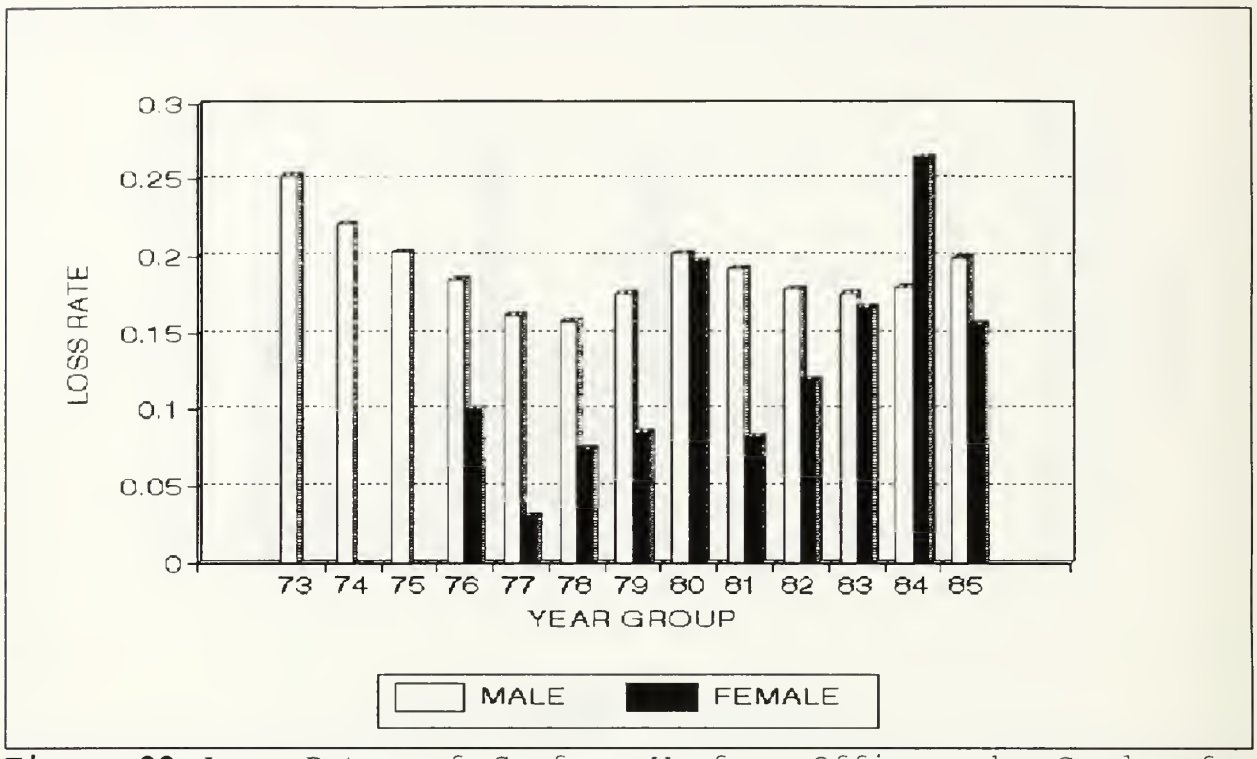

Figure 22 Loss Rates of Surface Warfare Officers by Gender for Milestone Period 2

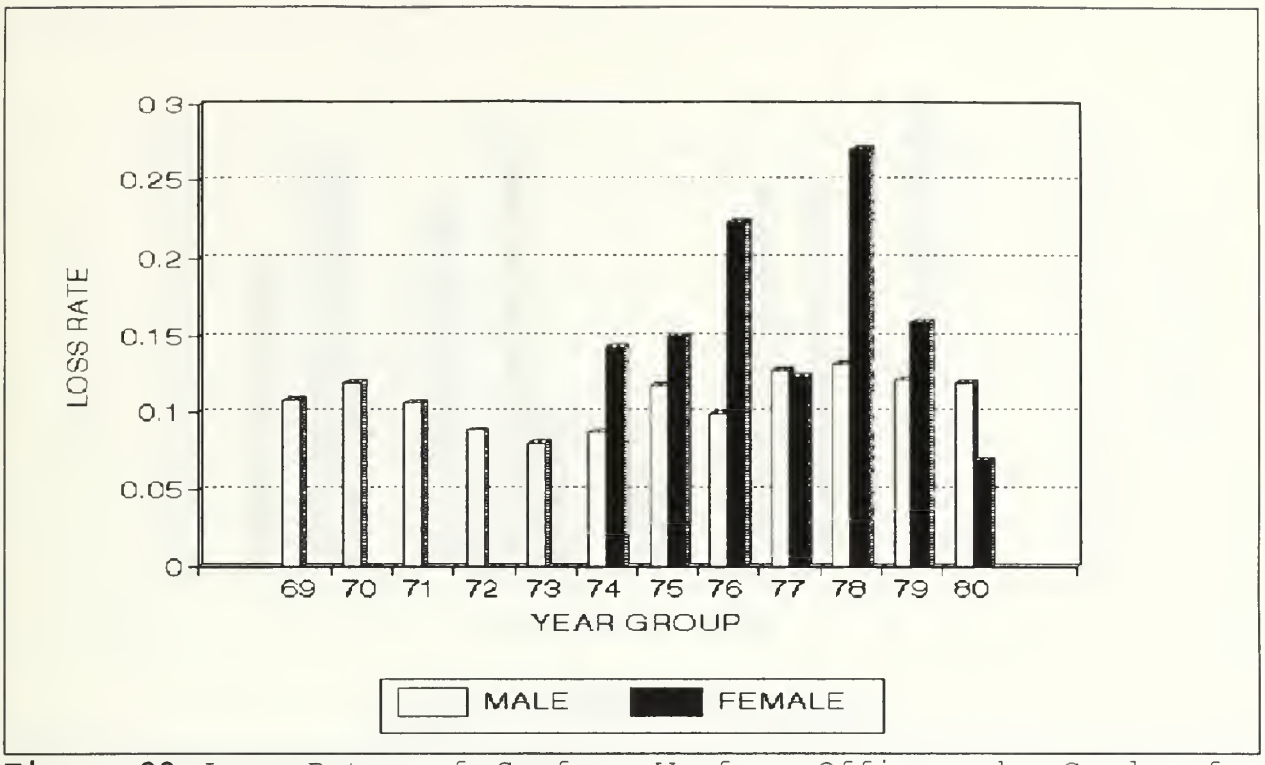

Figure 23 Loss Rates of Surface Warfare Officers by Gender for Milestone Period 3

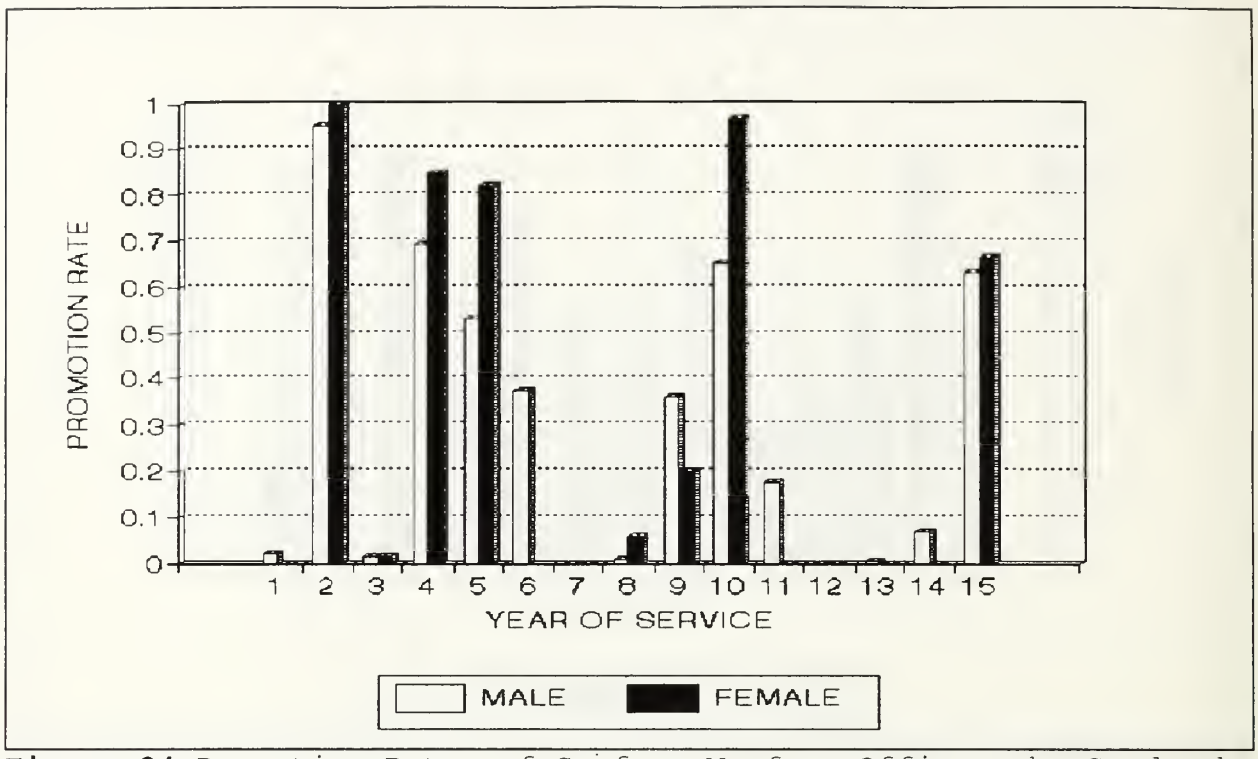

Figure 24 Promotion Rates of Surface Warfare Officers by Gender by Year of Service Averaged Across Year Groups

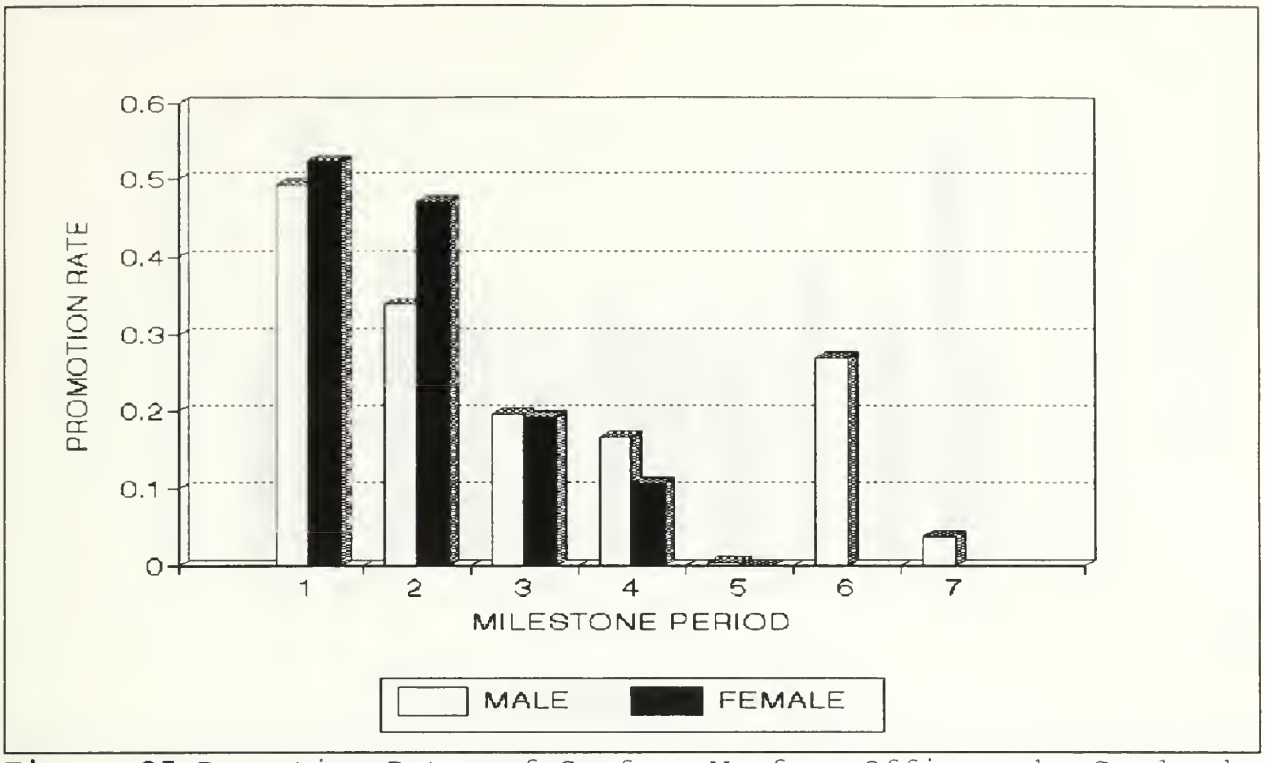

Figure 25 Promotion Rates of Surface Warfare Officers by Gender by Milestone Period Averaged Across Year Groups

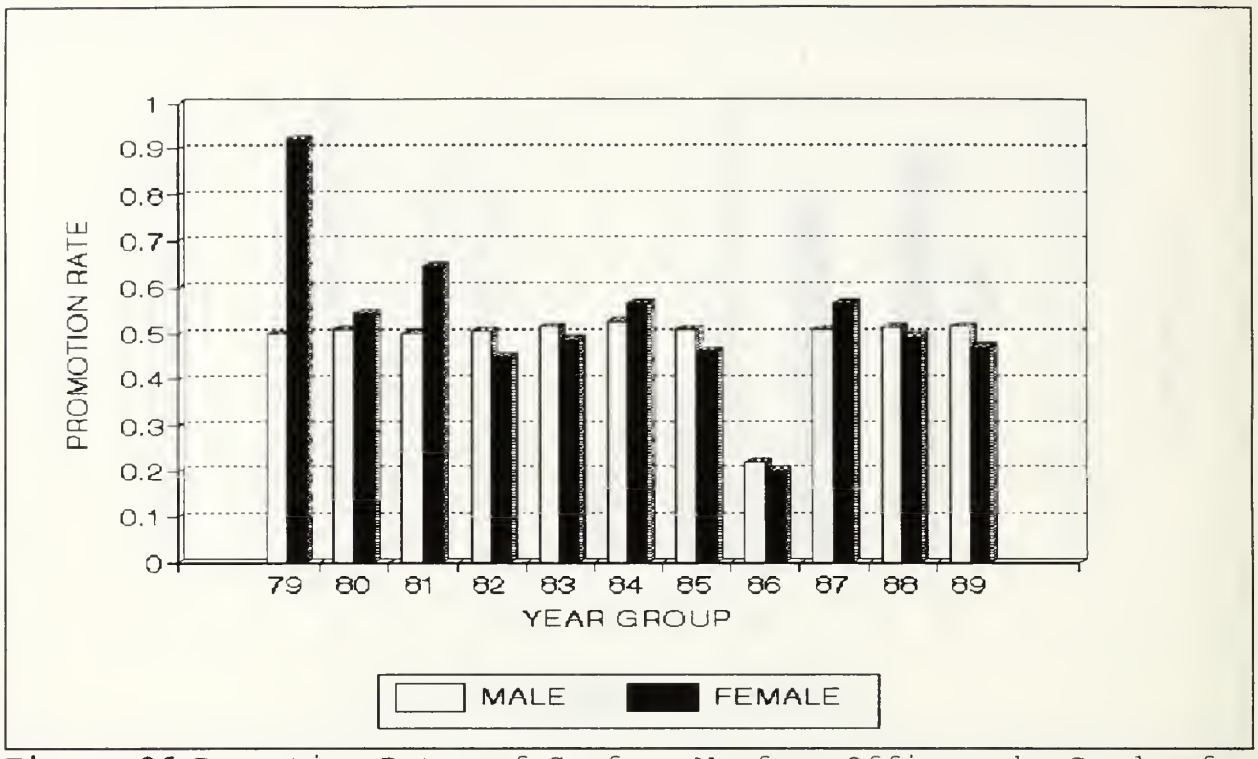

Figure 26 Promotion Rates of Surface Warfare Officers by Gender for Milestone Period 1

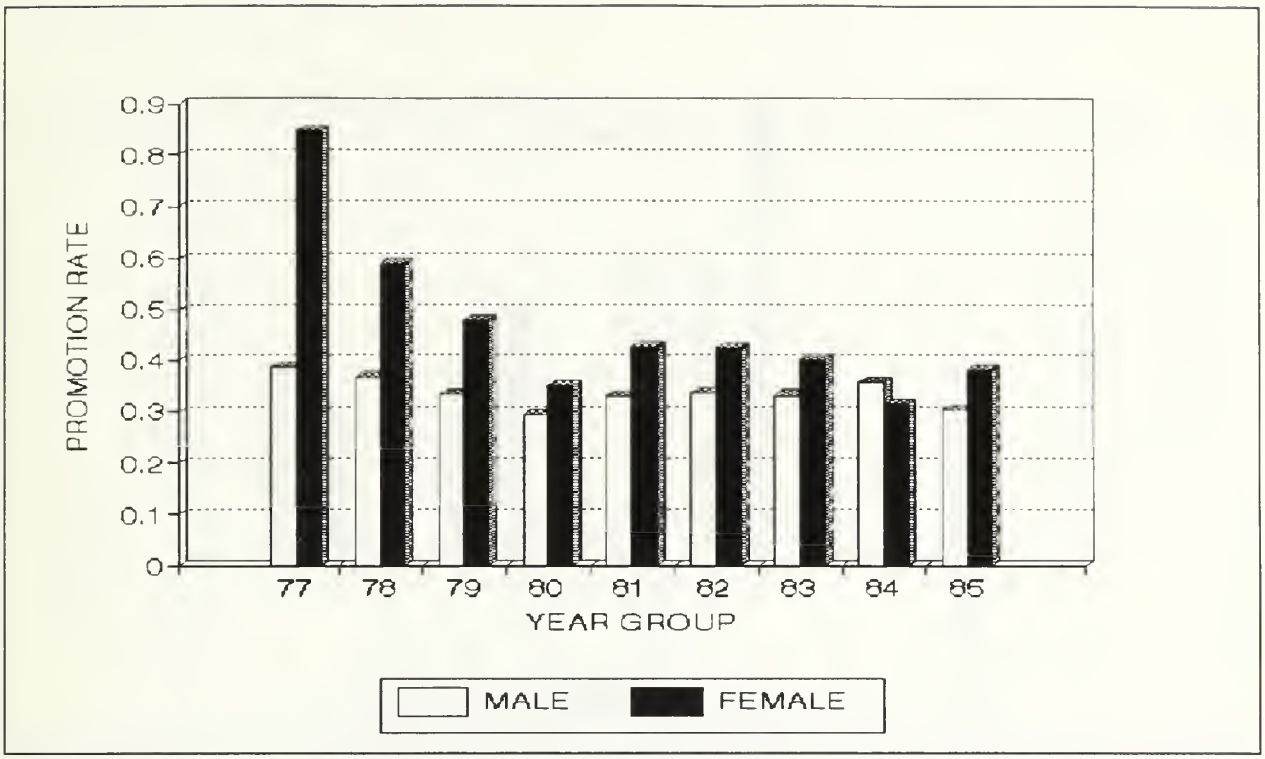

Figure 27 Promotion Rates of Surface Warfare Officers by Gender for Milestone Period 2

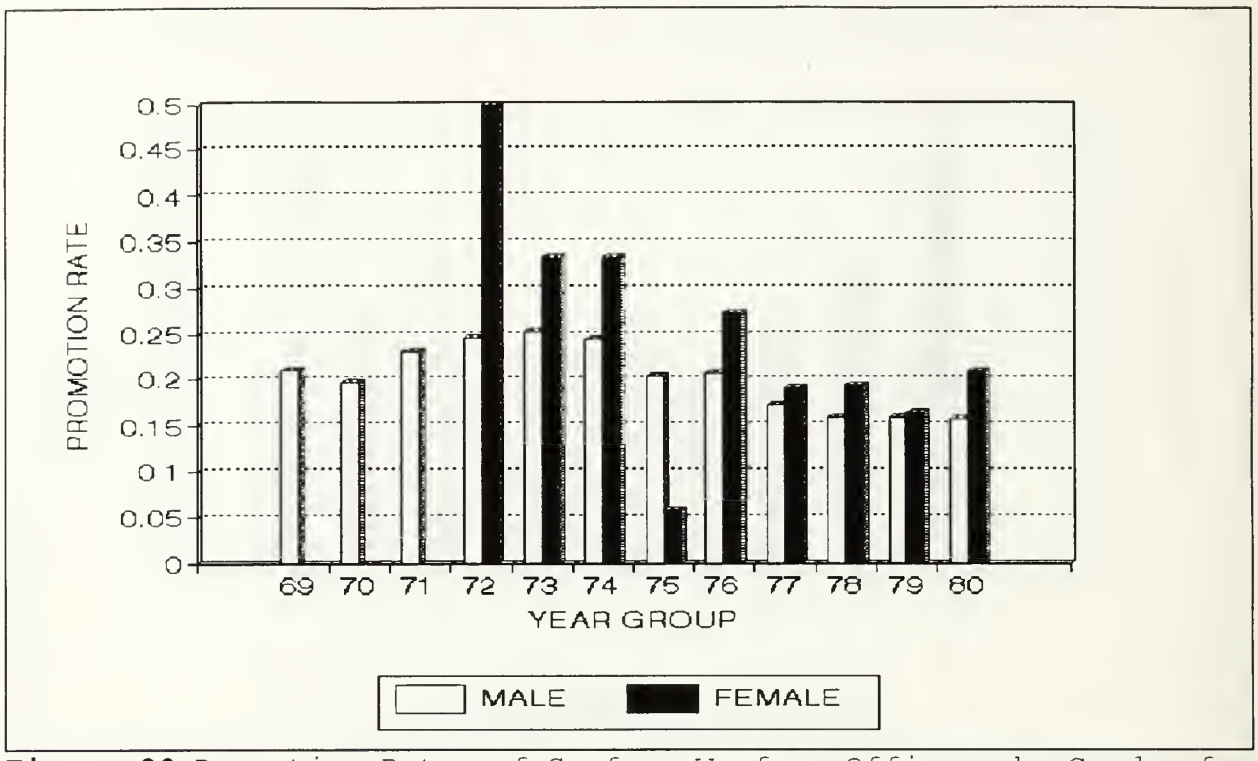

Figure 28 Promotion Rates of Surface Warfare Officers by Gender for Milestone Period 3

APPENDIX O - SUPPORTING GRAPHS FOR THE GENERAL UNRESTRICTED LINE COMMUNITY

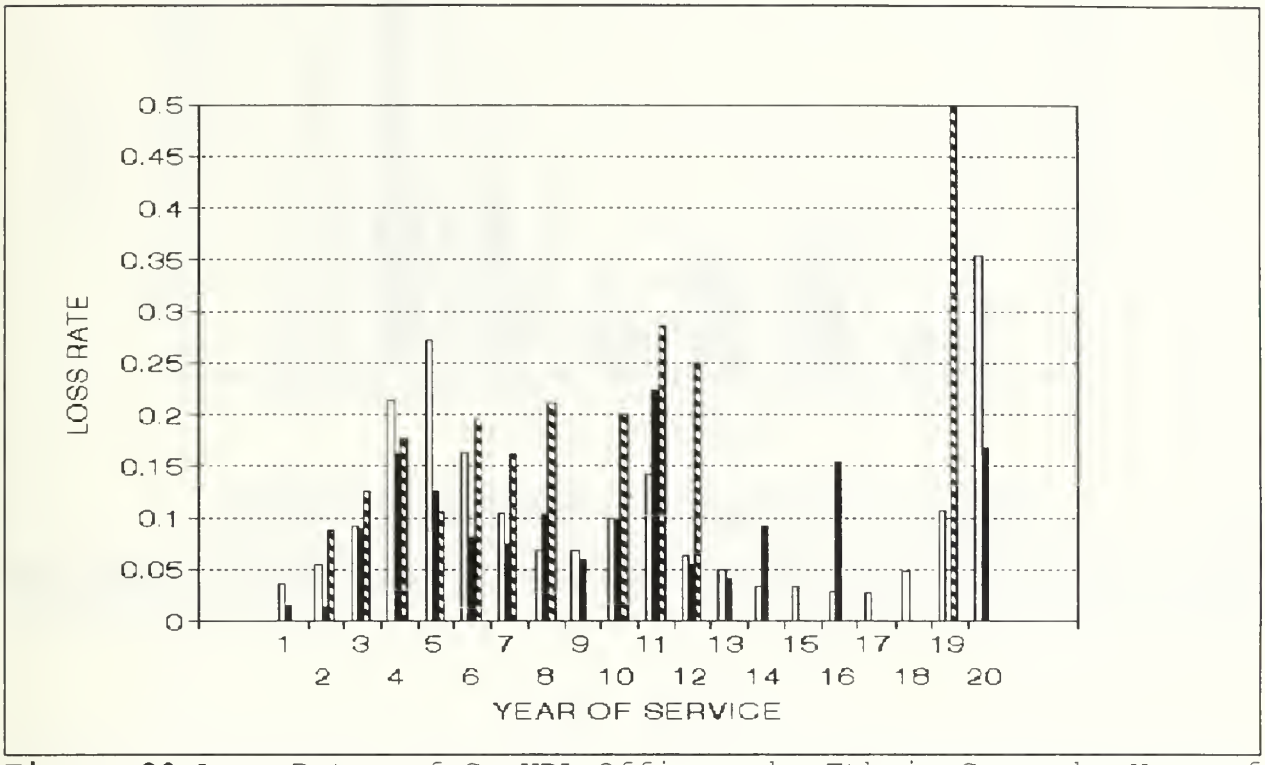

Figure 29 Loss Rates of GenURL Officers by Ethnic Group by Year of Service Averaged Across Year Groups

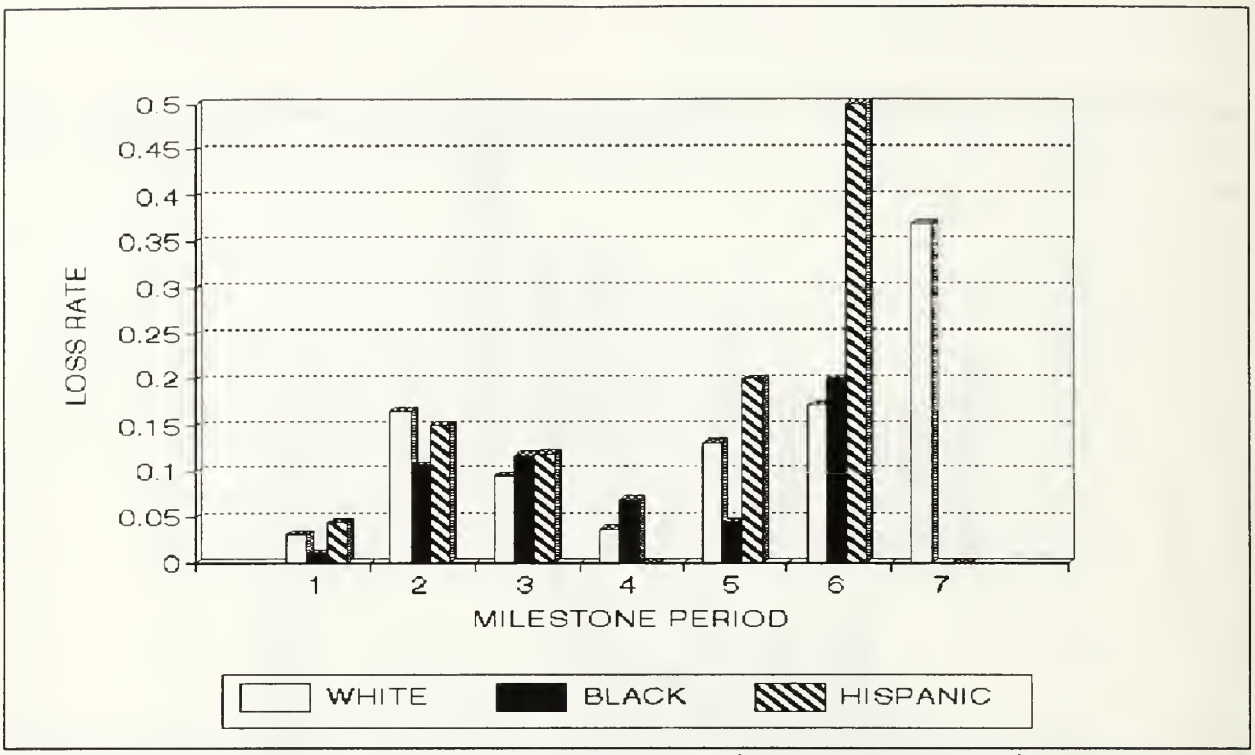

Figure 30 Loss Rates of GenURL Officers by Ethnic Group by Milestone Period Averaged Across Year Groups

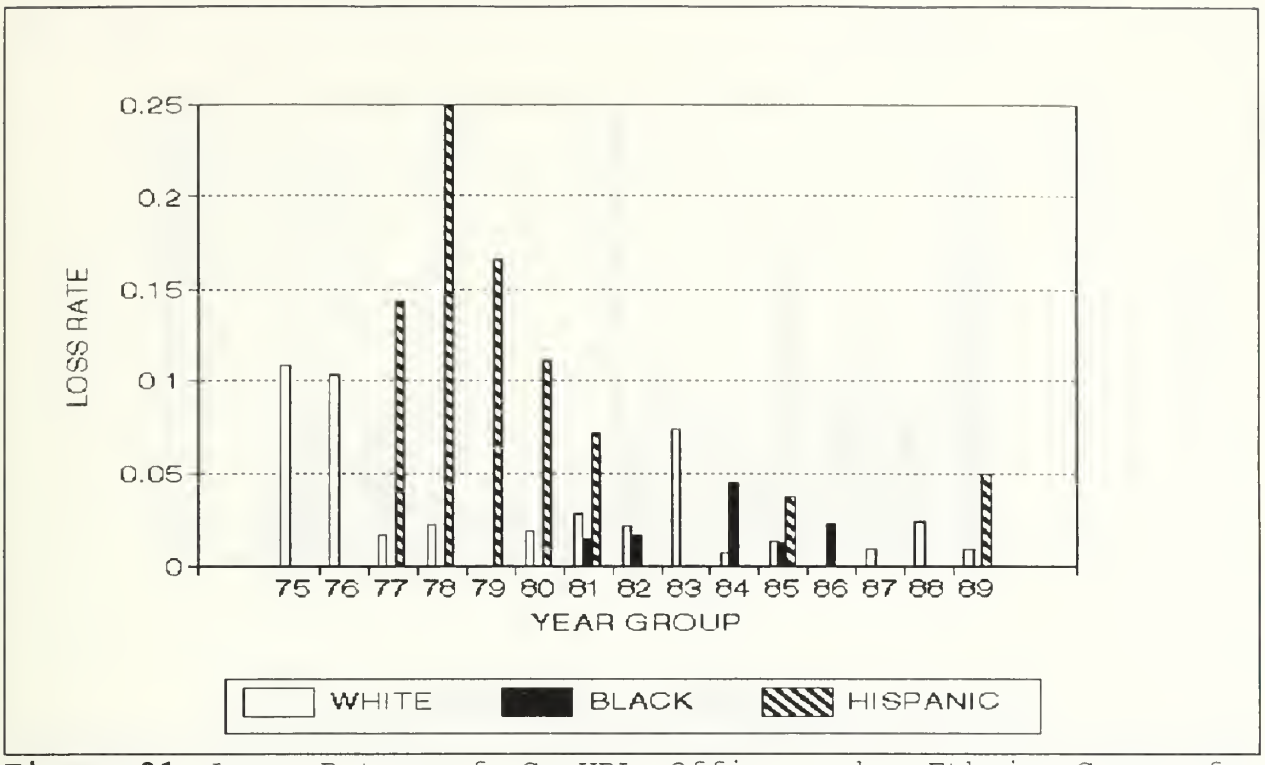

Figure 31 Loss Rates of GenURL Officers by Ethnic Group for Milestone Period 1

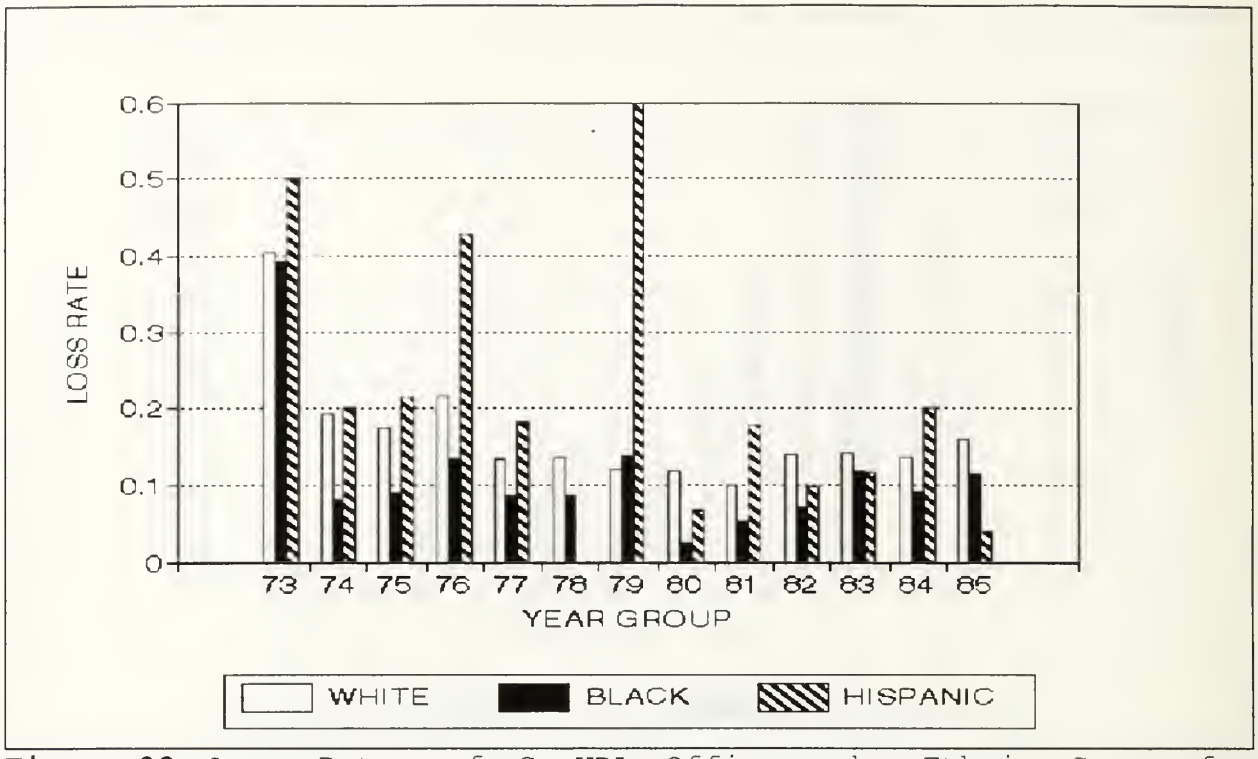

Figure 32 Loss Rates of GenURL Officers by Ethnic Group for Milestone Period 2

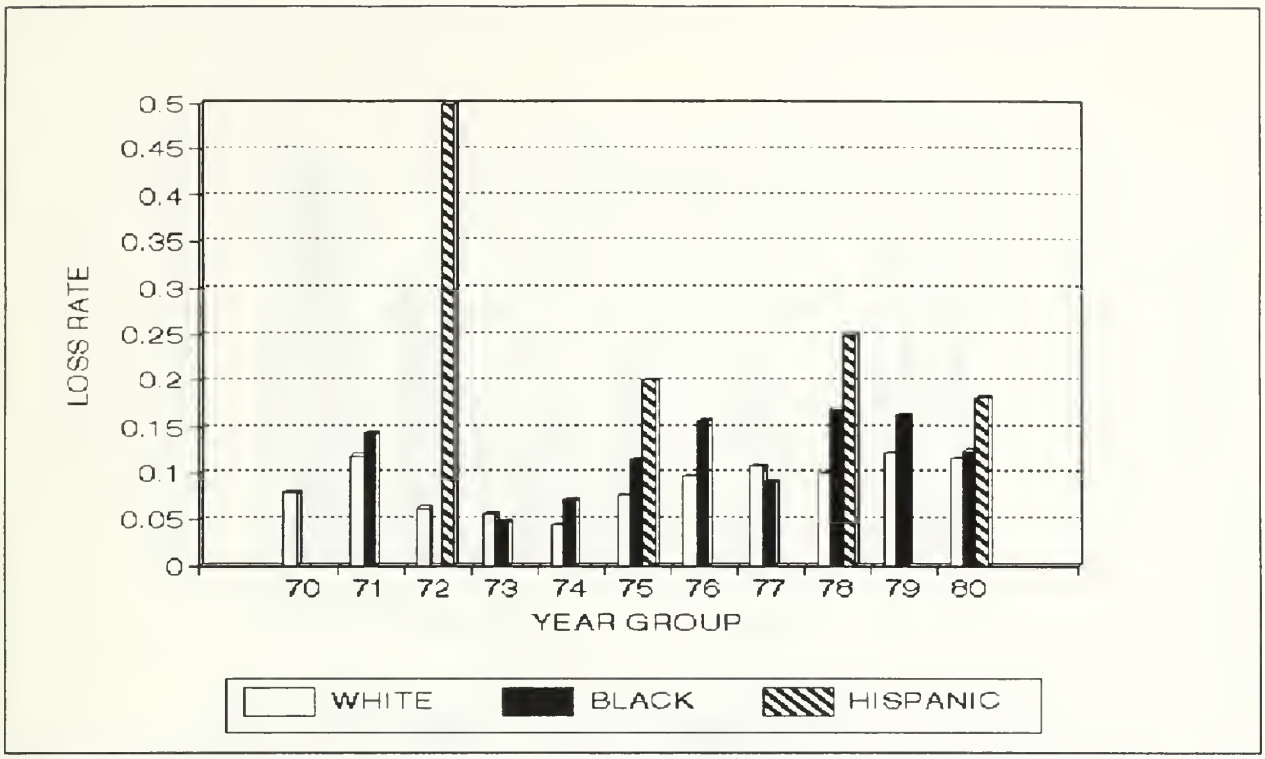

Figure 33 Loss Rates of GenURL Officers by Ethnic Group for Milestone Period 3

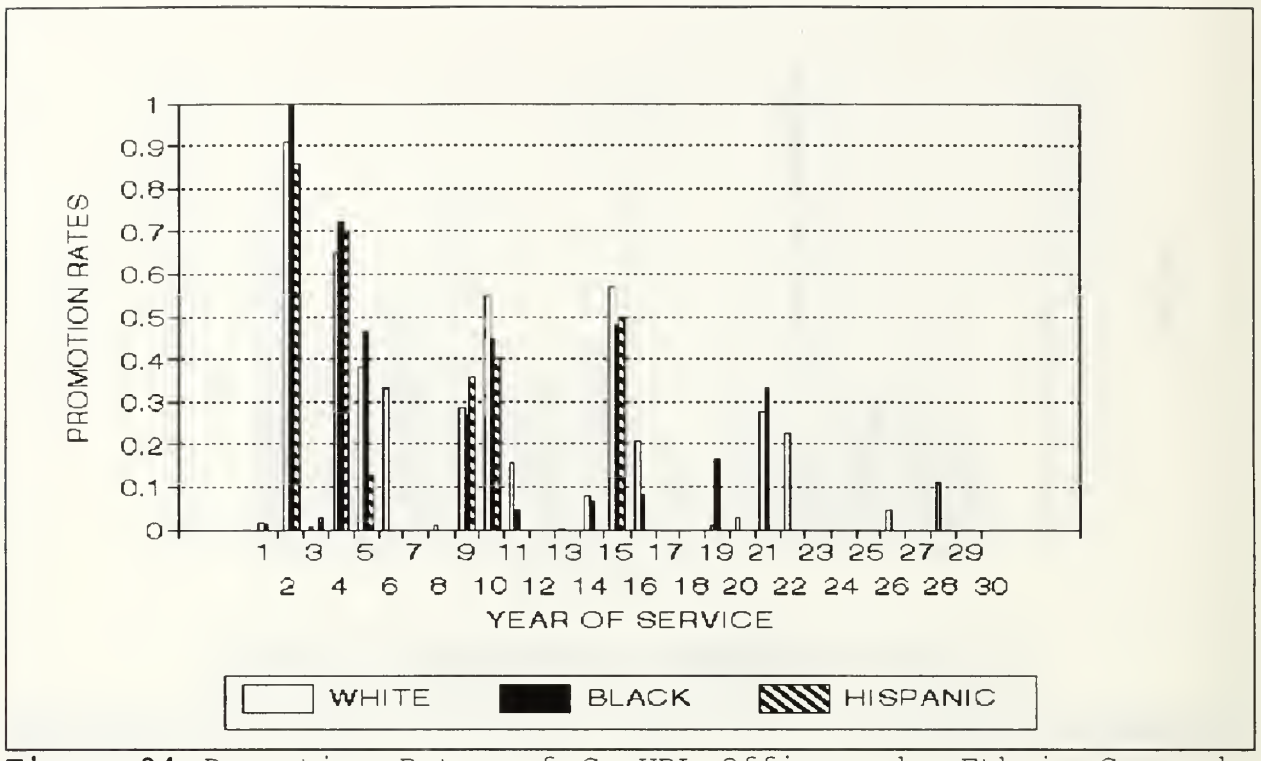

Figure 34 Promotion Rates of GenURL Officers by Ethnic Group by Year of Service Averaged Across Year Groups

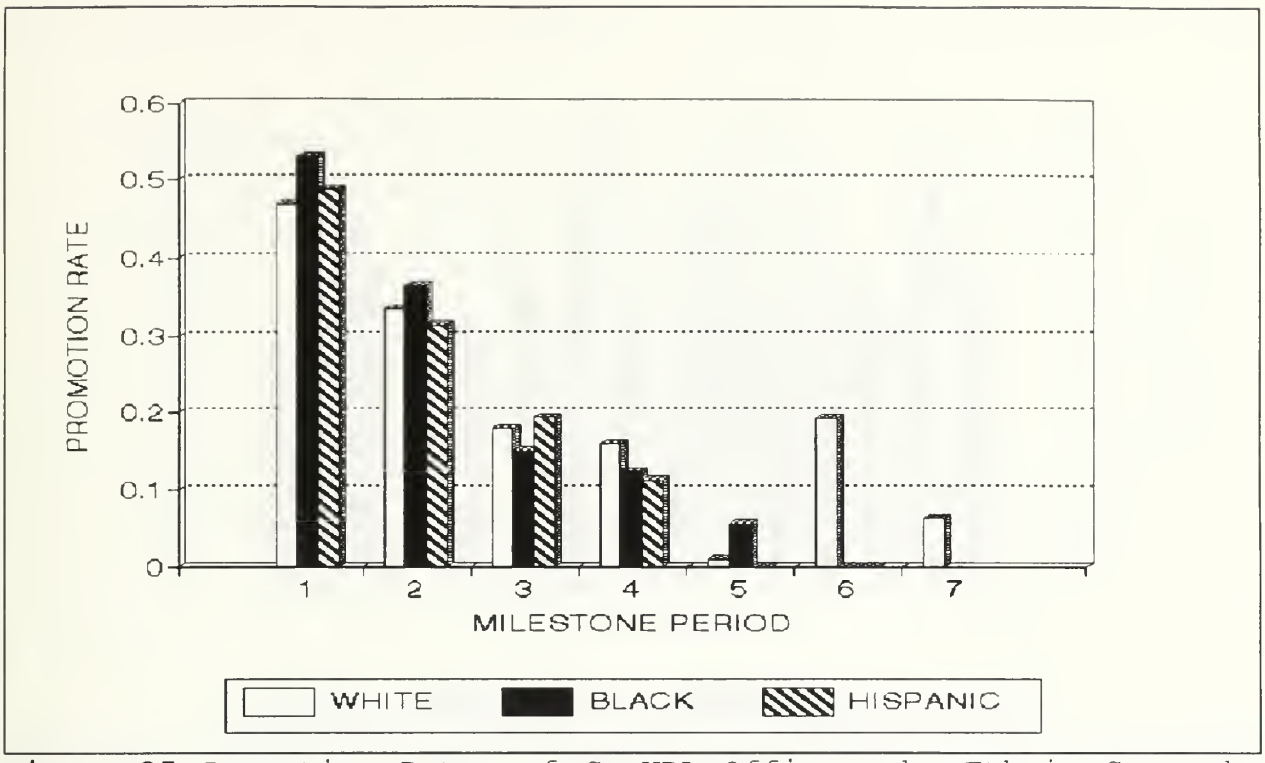

Figure 35 Promotion Rates of GenURL Officers by Ethnic Group by Milestone Period Averaged Across Year Groups

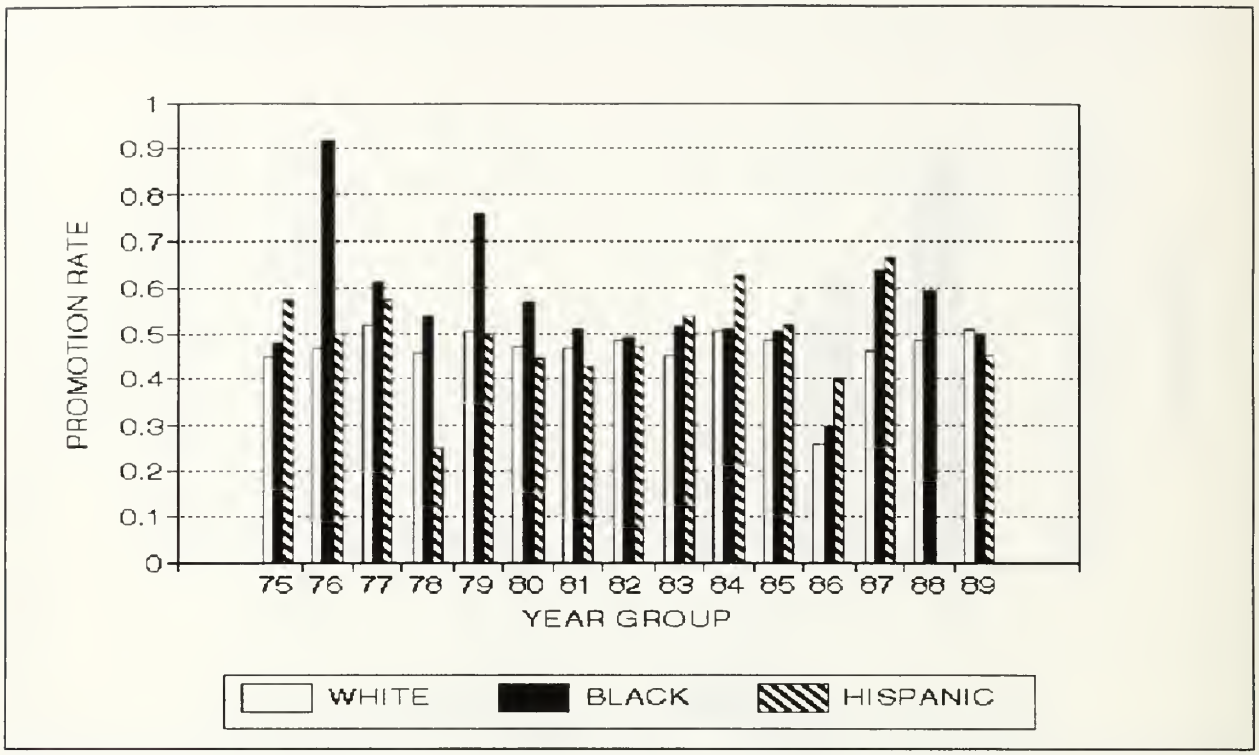

Figure 36 Promotion Rates of GenURL Officers by Ethnic Group for Milestone Period 1

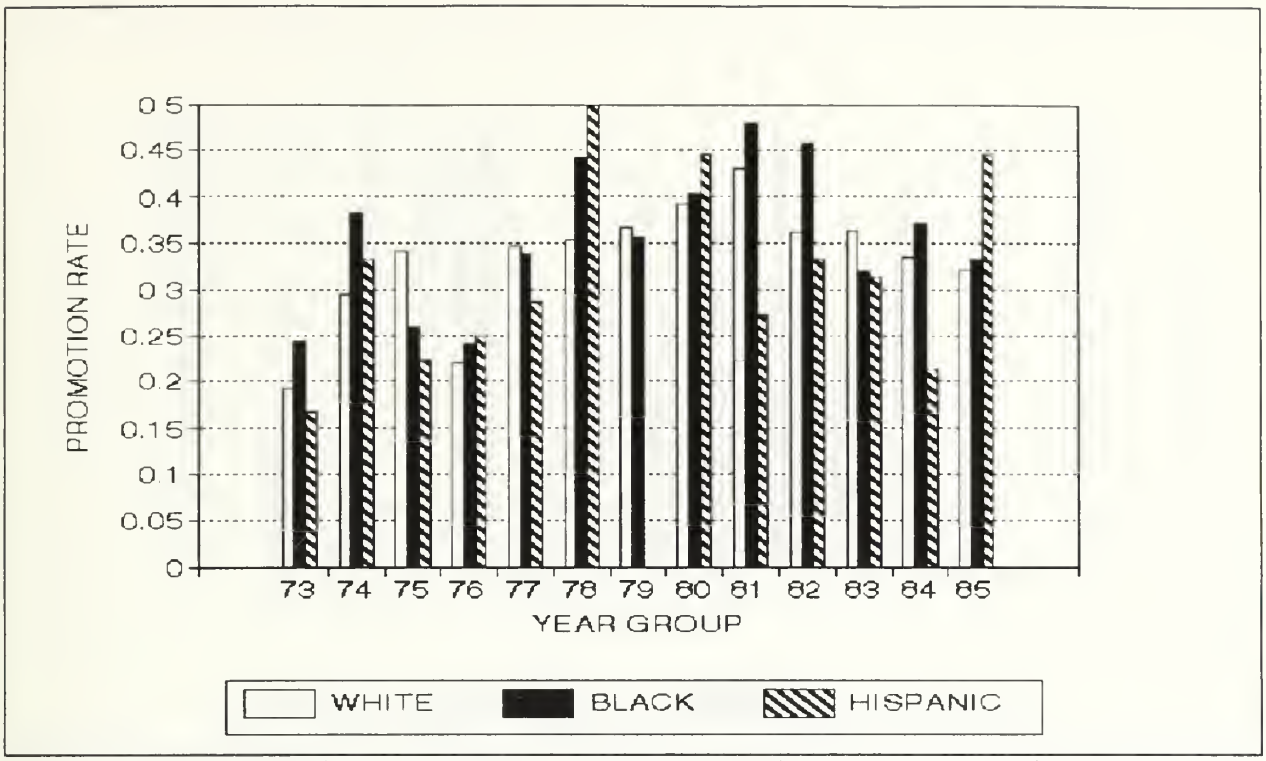

Figure 37 Promotion Rates of GenURL Officers by Ethnic Group for Milestone Period 2

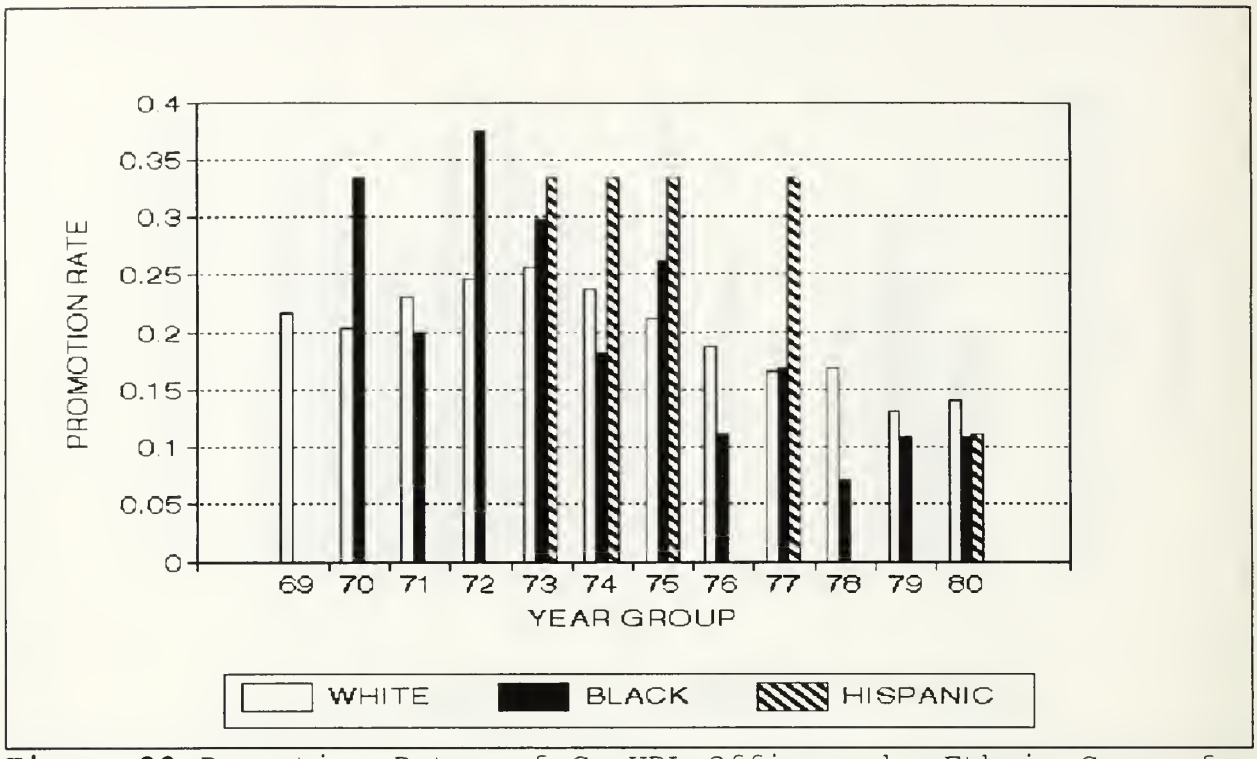

Figure 38 Promotion Rates of GenURL Officers by Ethnic Group for Milestone Period 3

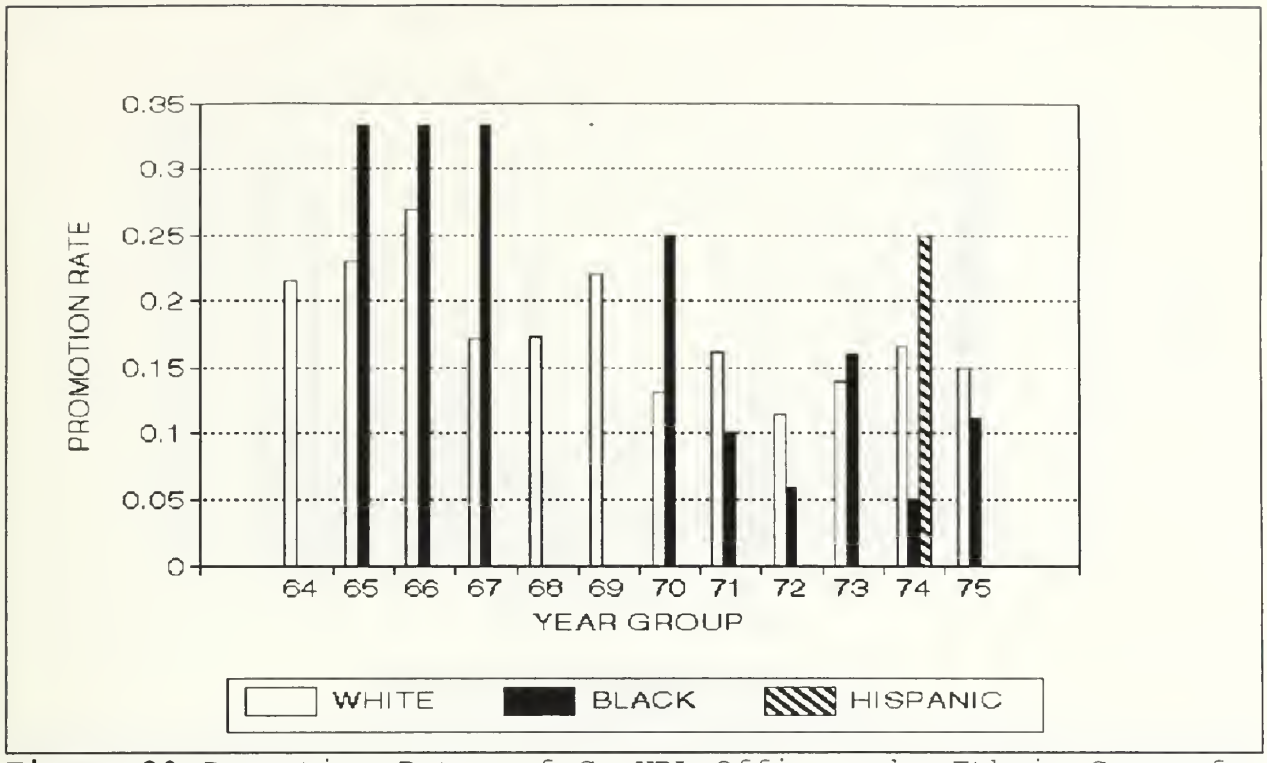

Figure 39 Promotion Rates of GenURL Officers by Ethnic Group for Milestone Period 4

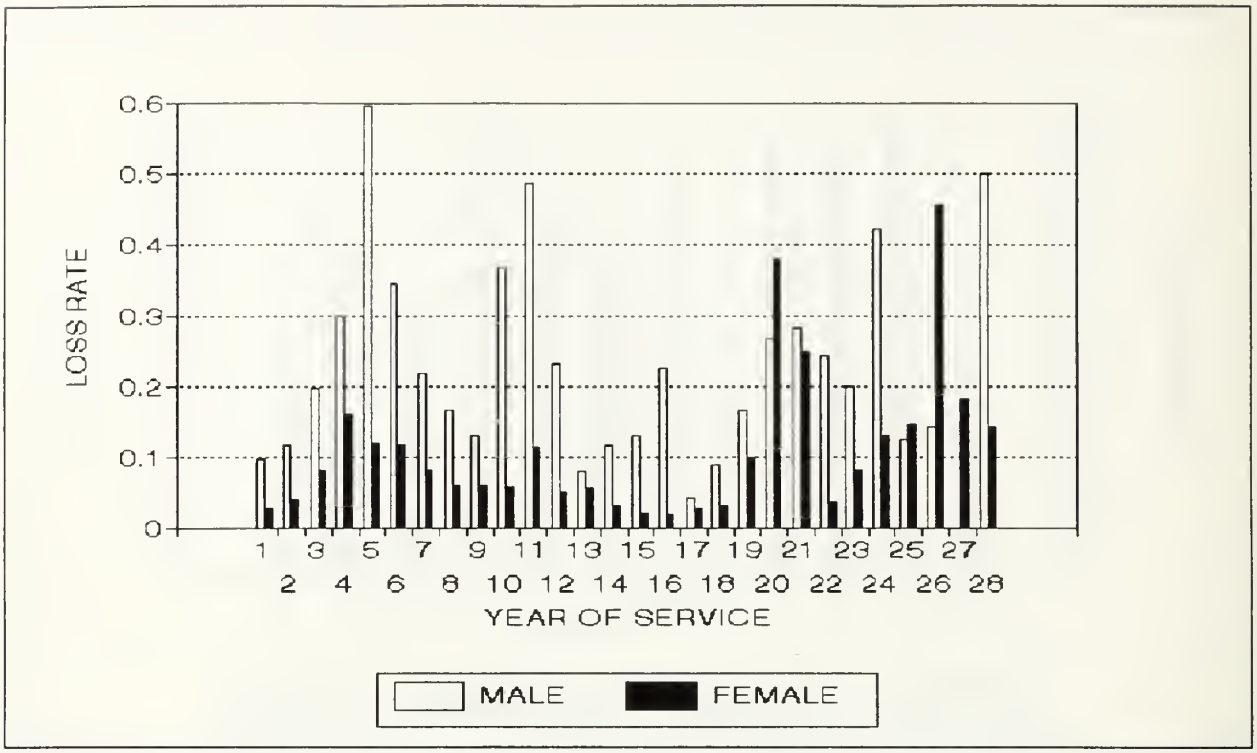

Figure 40 Loss Rates of GenURL Officers by Gender by Year of Service Averaged Across Year Groups

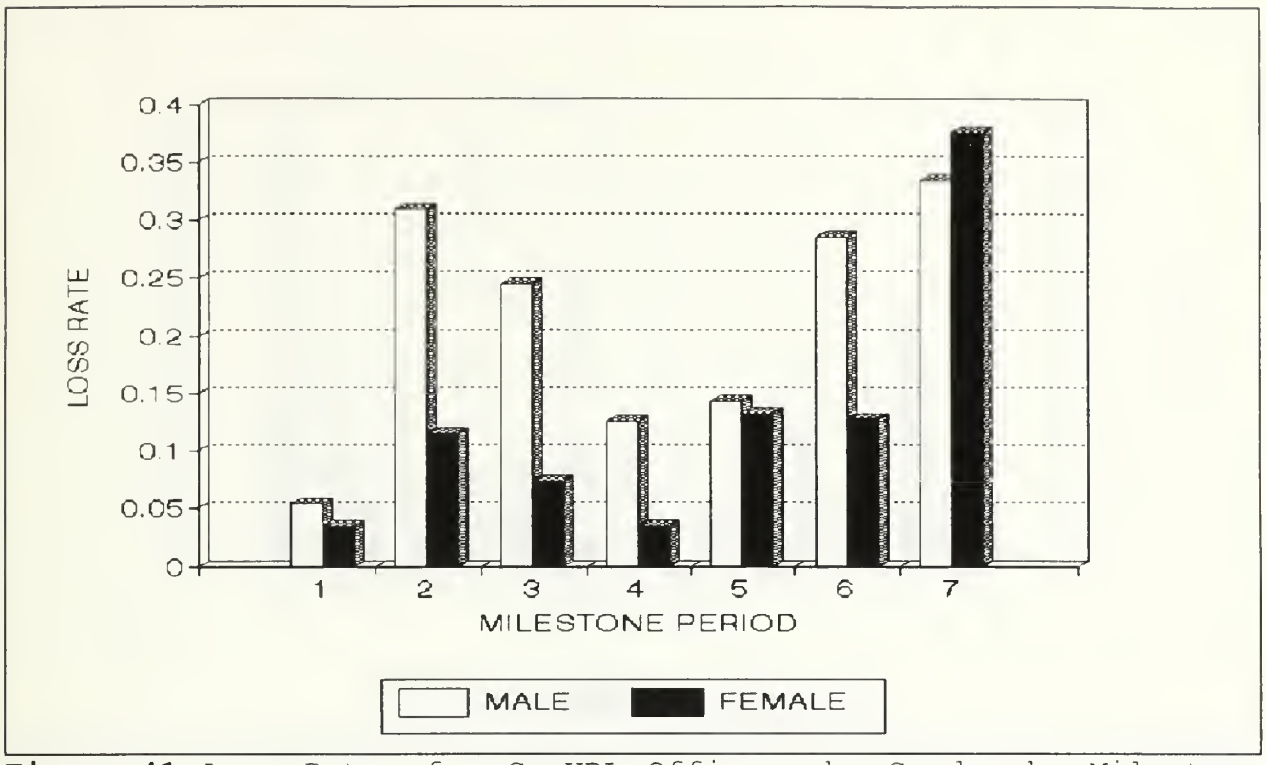

Figure 41 Loss Rates for GenURL Officers by Gender by Milestone Period Averaged Across Year Groups

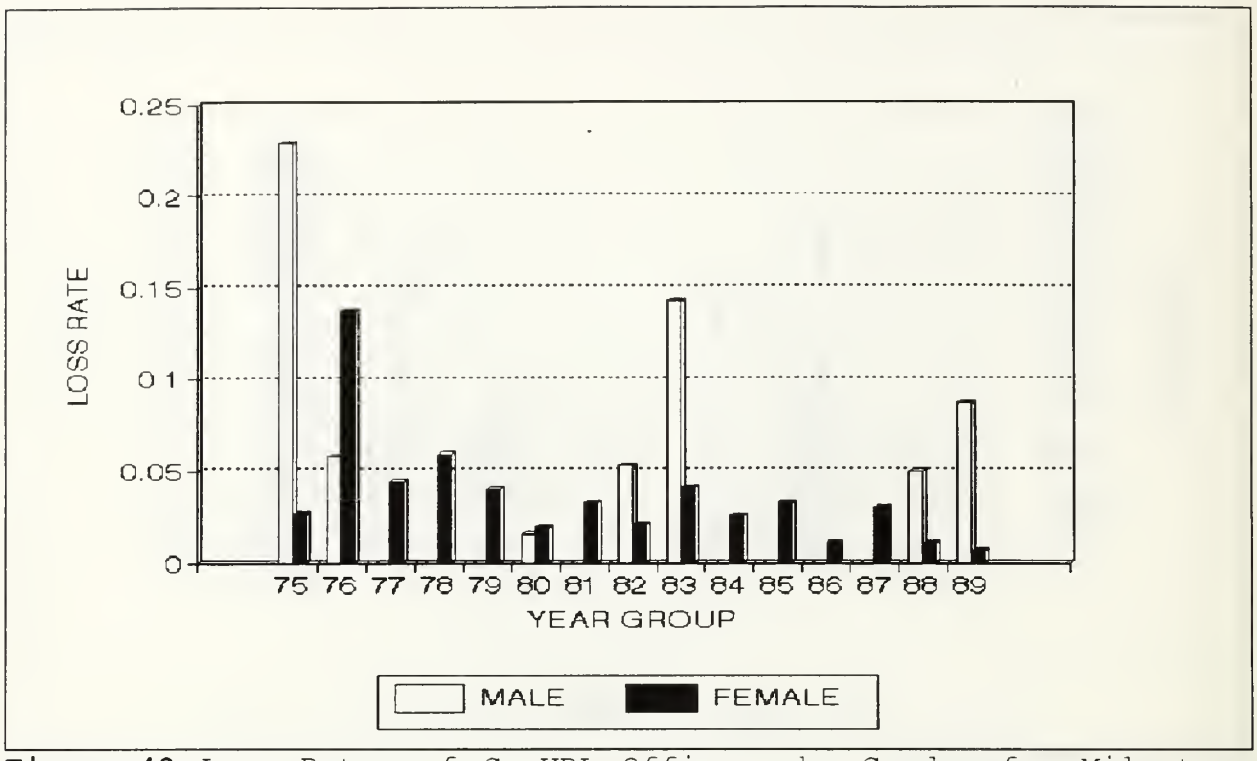

Figure 42 Loss Rates of GenURL Officers by Gender for Milestone Period 1

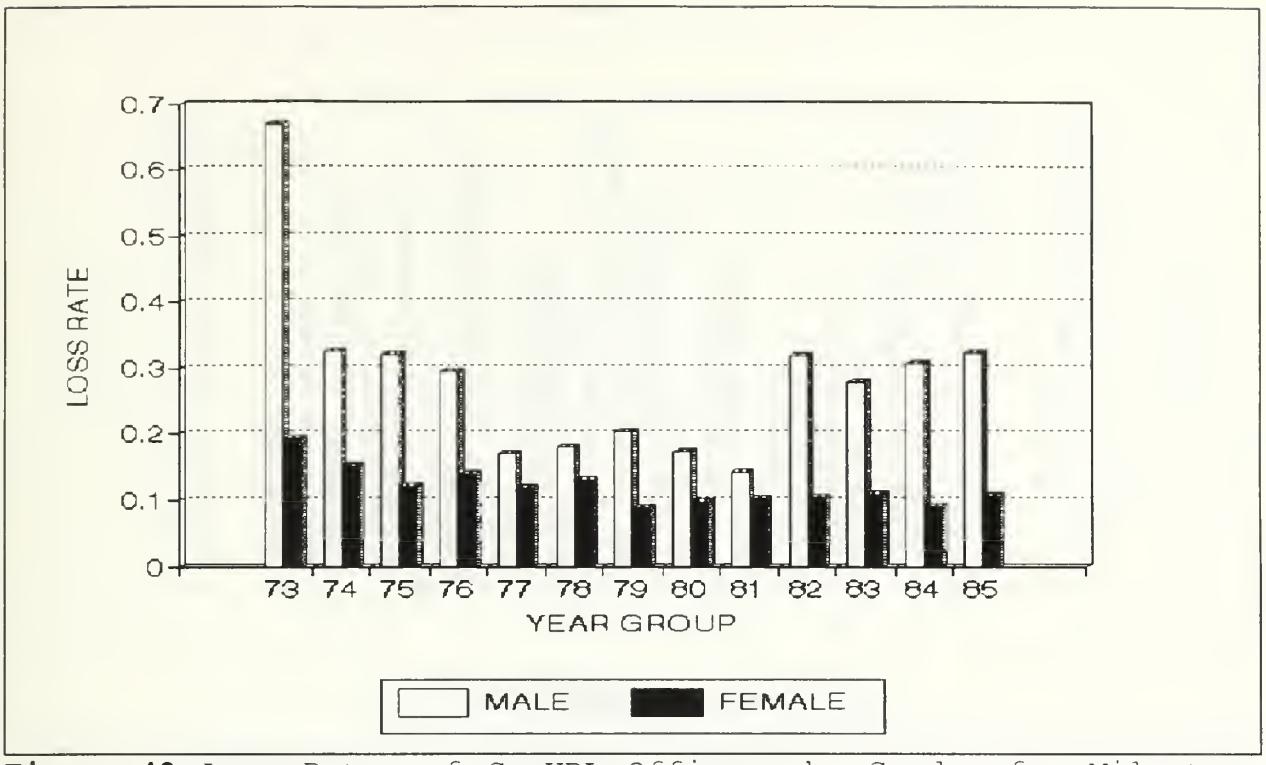

Figure 43 Loss Rates of GenURL Officers by Gender for Milestone Period 2

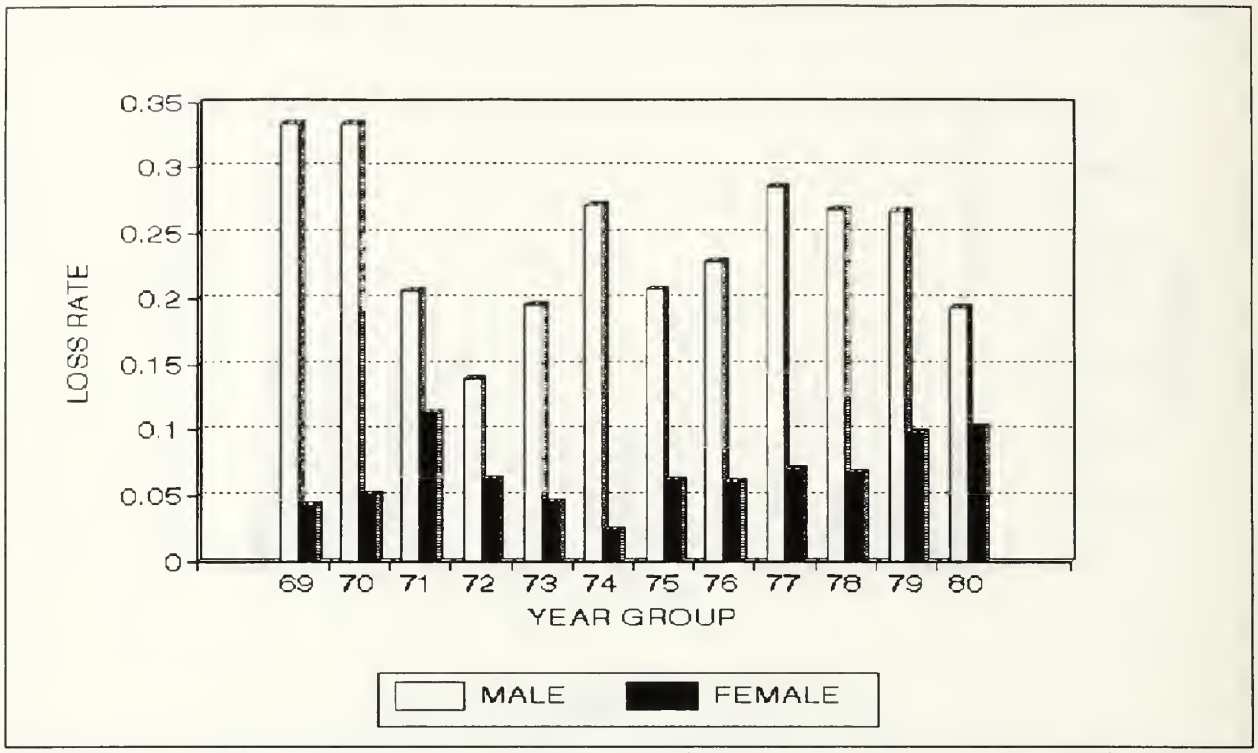

Figure 44 Loss Rates of GenURL Officers by Gender for Milestone Period 3

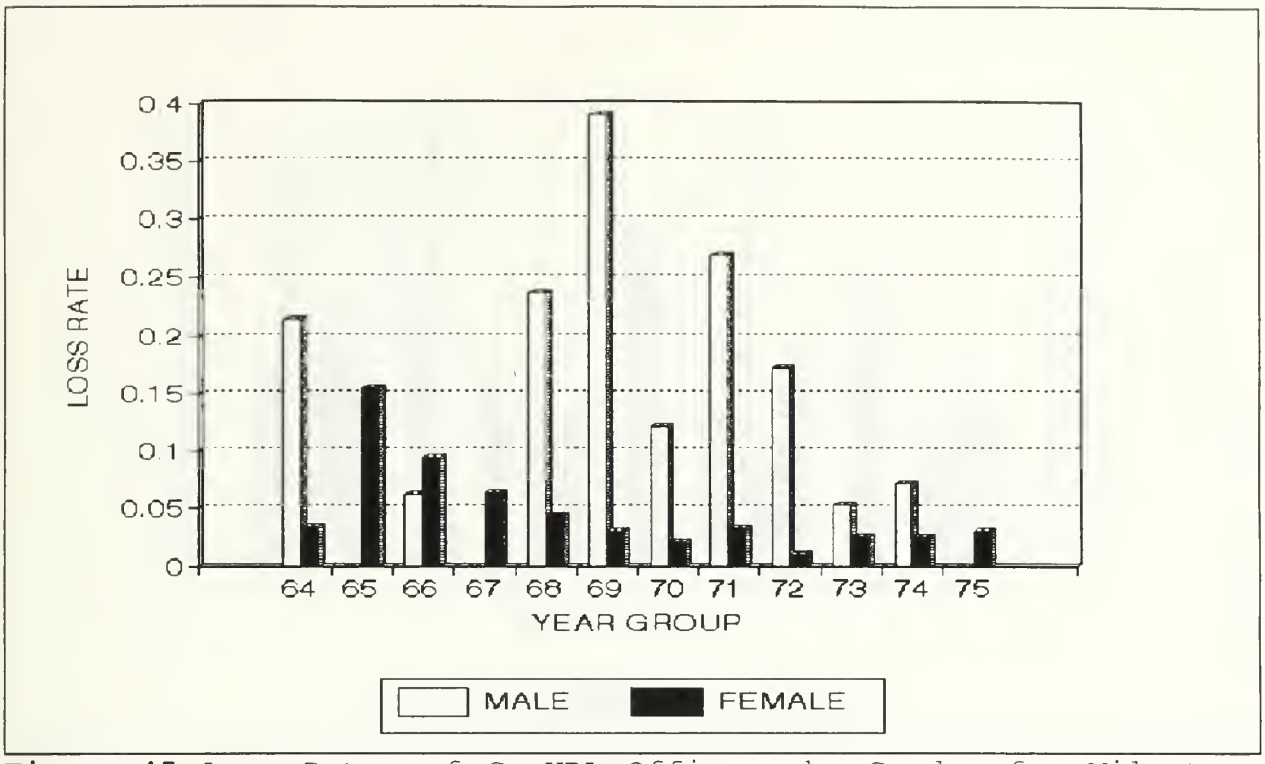

Figure 45 Loss Rates of GenURL Officers by Gender for Milestone Period 4

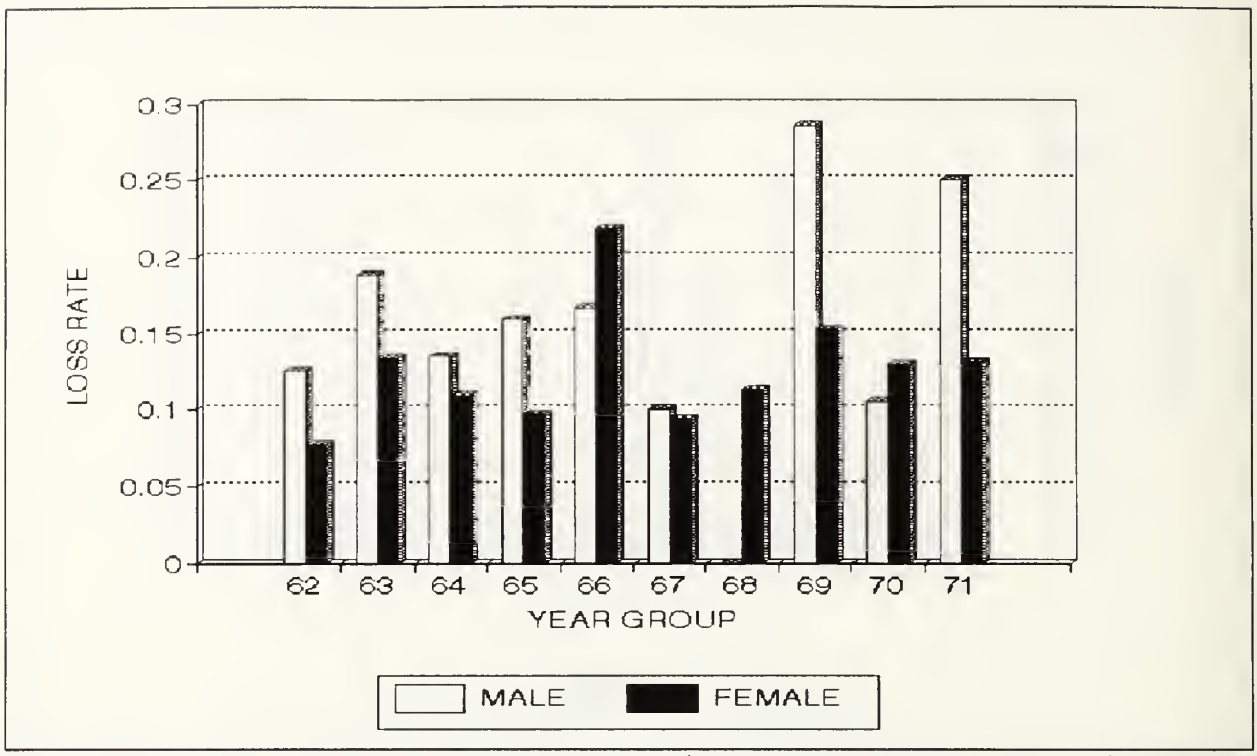

Figure 46 Loss Rates of GenURL Officers by Gender for Milestone Period 5

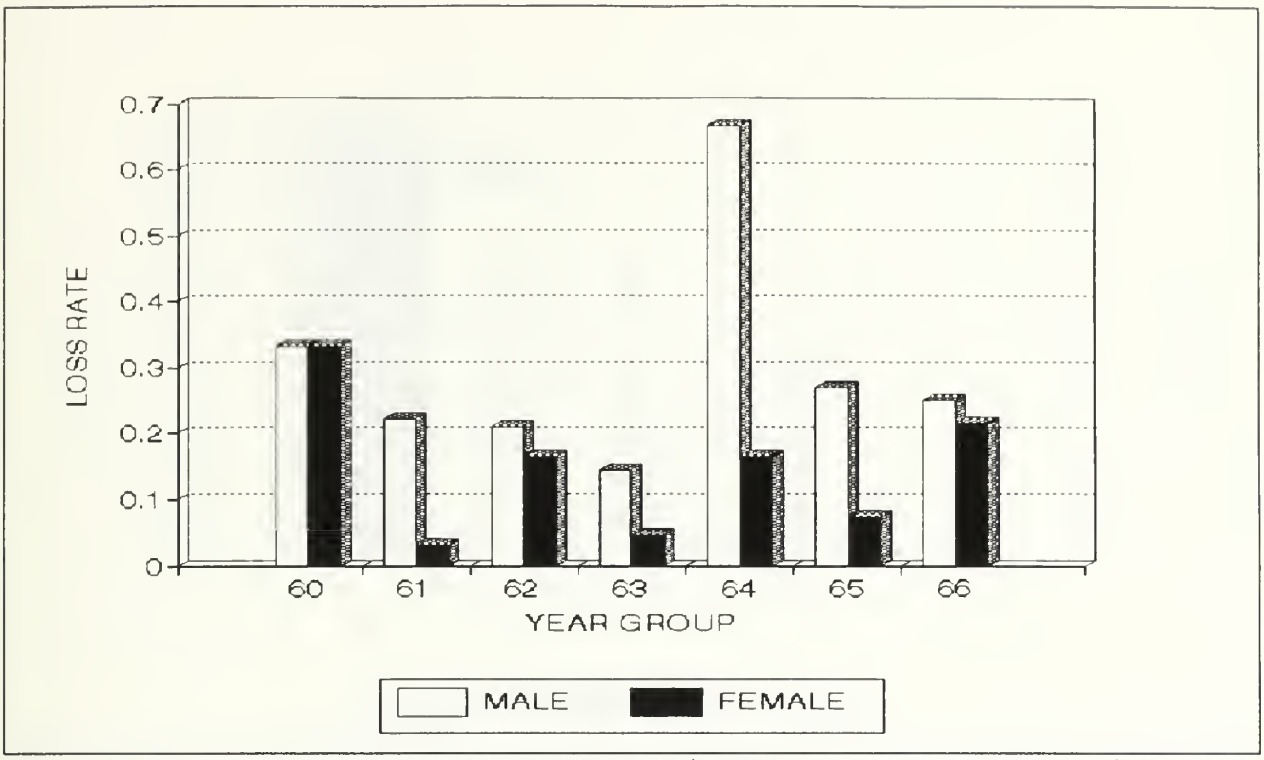

Figure 47 Loss Rates of GenURL Officers by Gender for Milestone Period 6

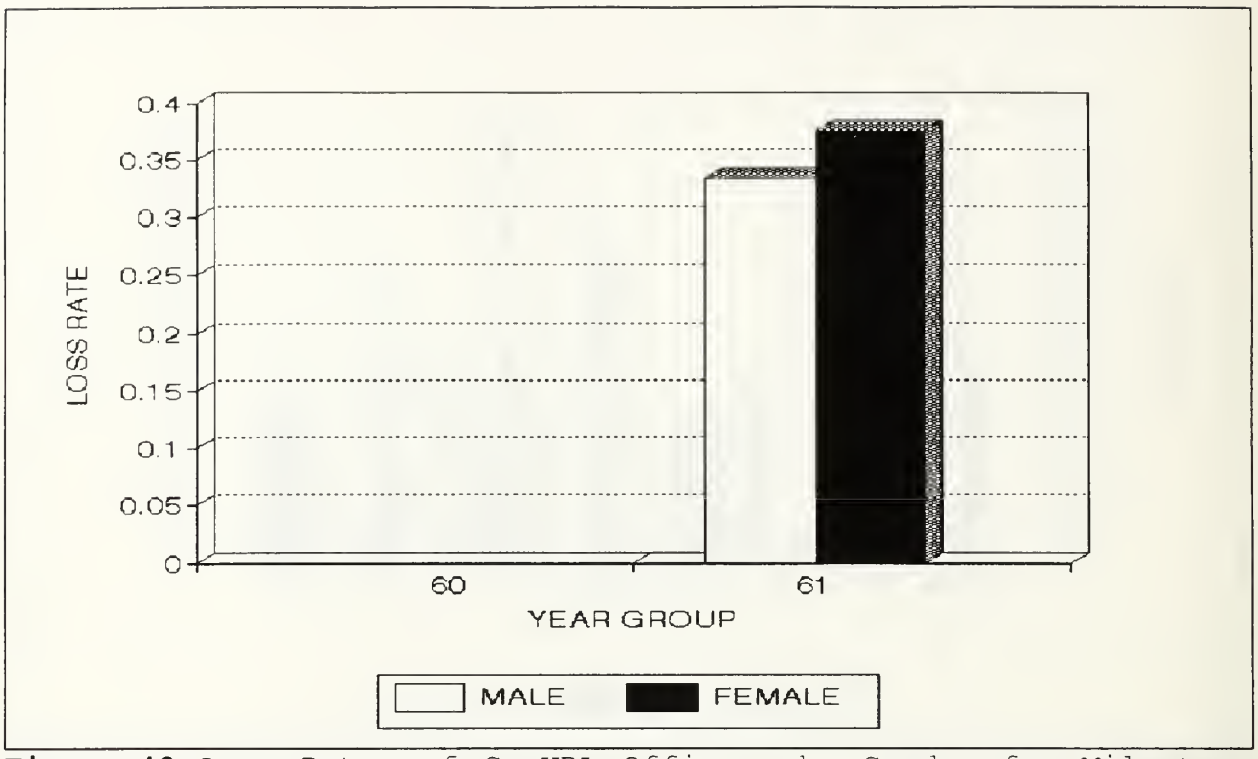

Figure 48 Loss Rates of GenURL Officers by Gender for Milestone Period 7

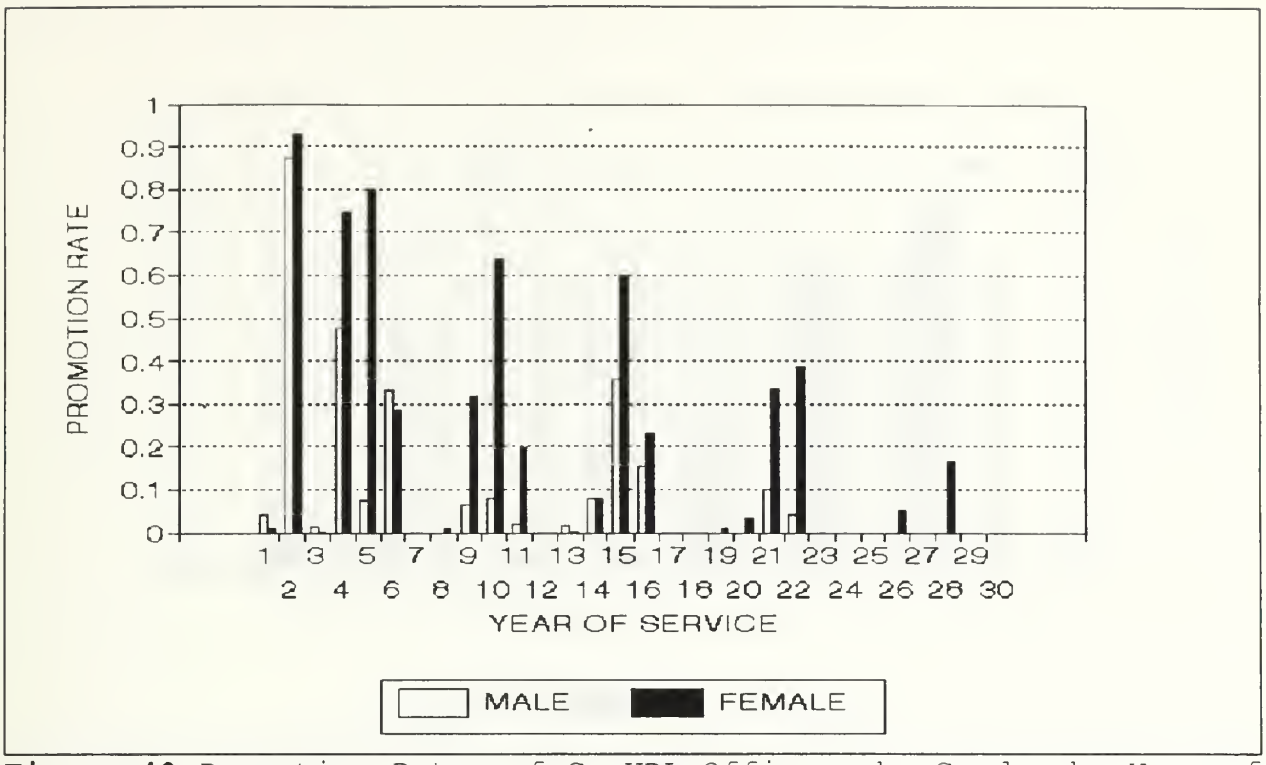

Figure 49 Promotion Rates of GenURL Officers by Gender by Year of Service Averaged Across Year Groups

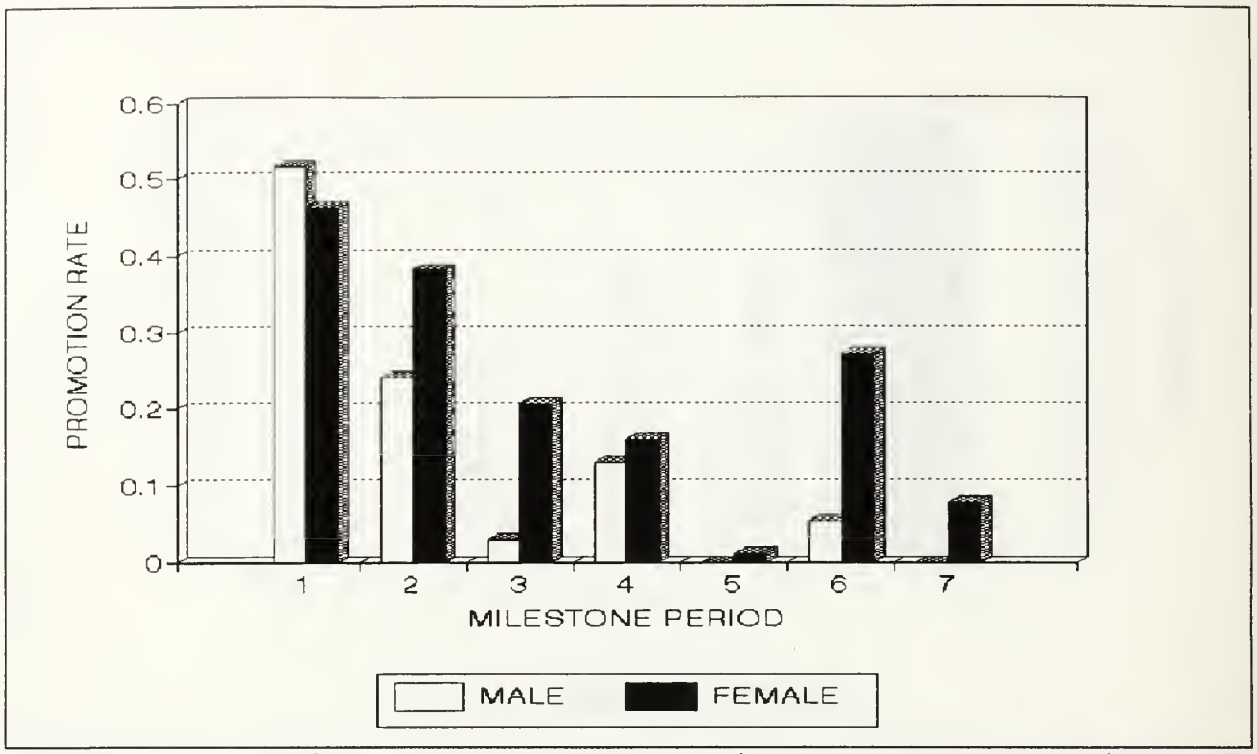

Figure 50 Promotion Rates of GenURL Officers by Gender by Milestone Period Averaged Across Year Groups

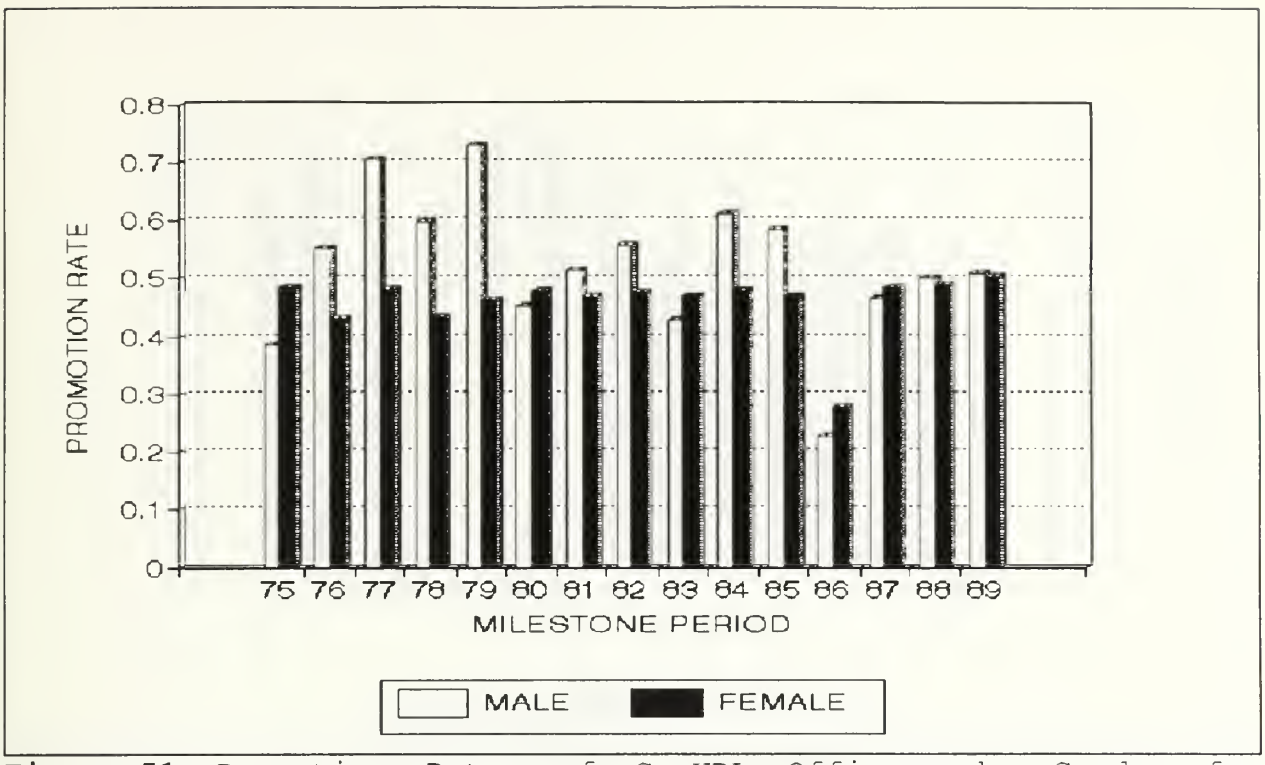

Figure 51 Promotion Rates of GenURL Officers by Gender for Milestone Period 1

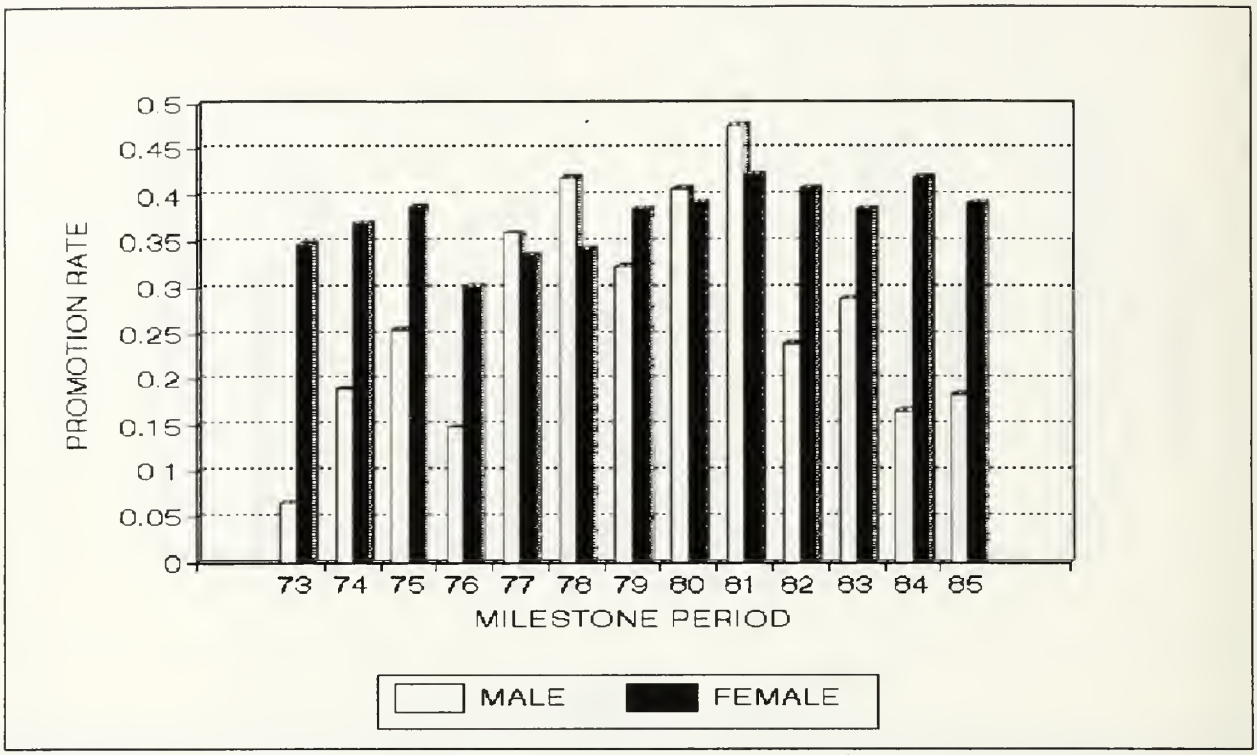

Figure 52 Promotion Rates of GenURL Officers by Gender for Milestone Period 2

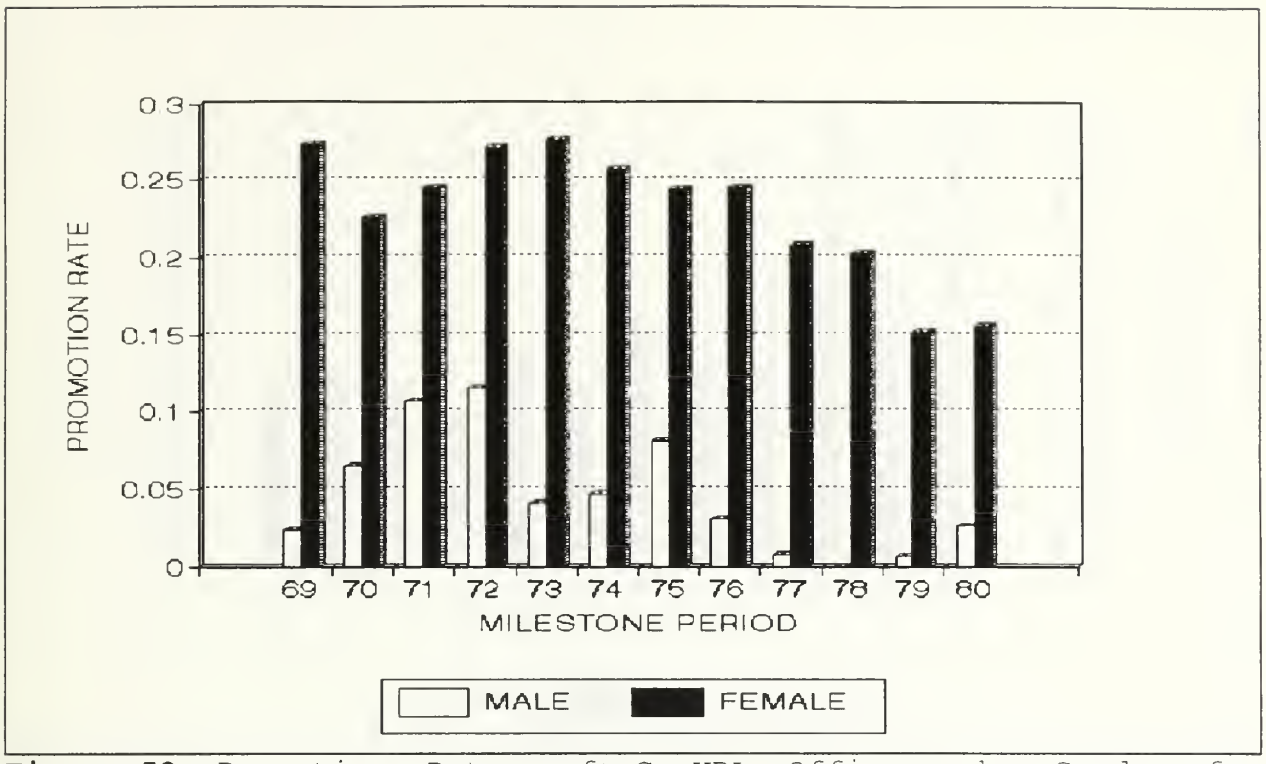

Figure 53 Promotion Rates of GenURL Officers by Gender for Milestone Period 3

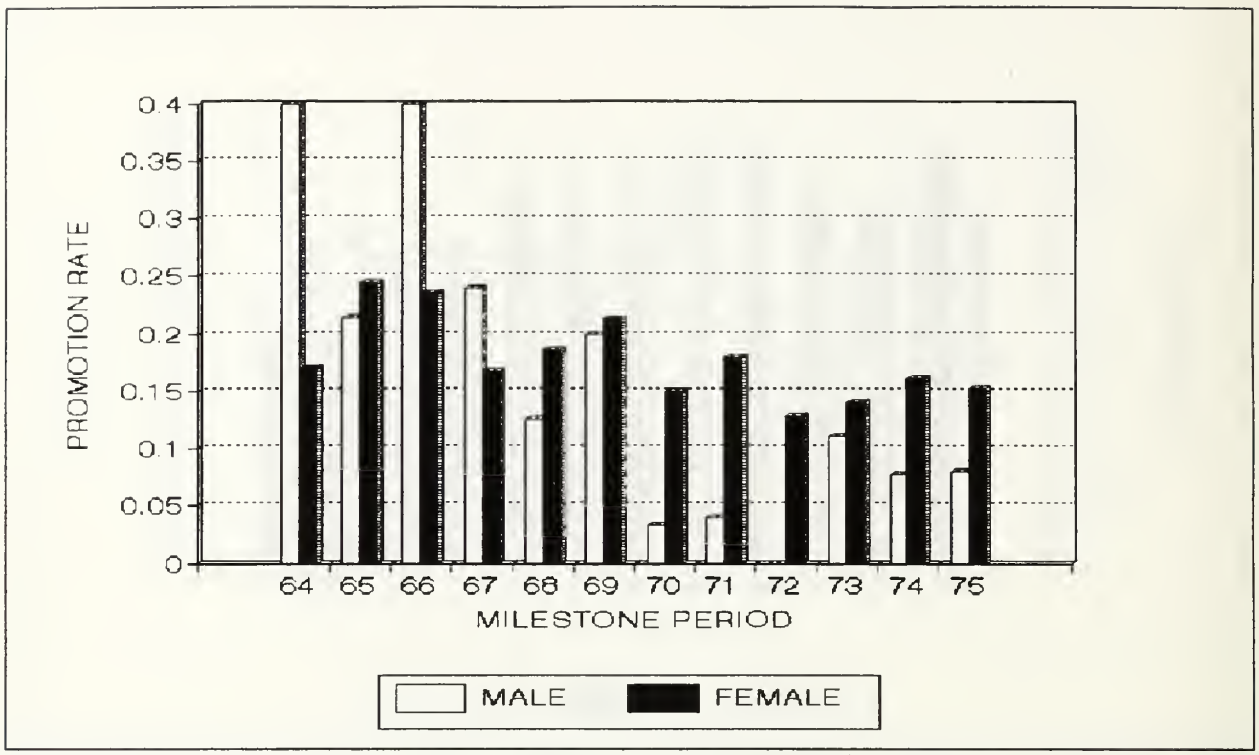

Figure 54 Promotion Rates of GenURL Officers by Gender for Milestone Period 4

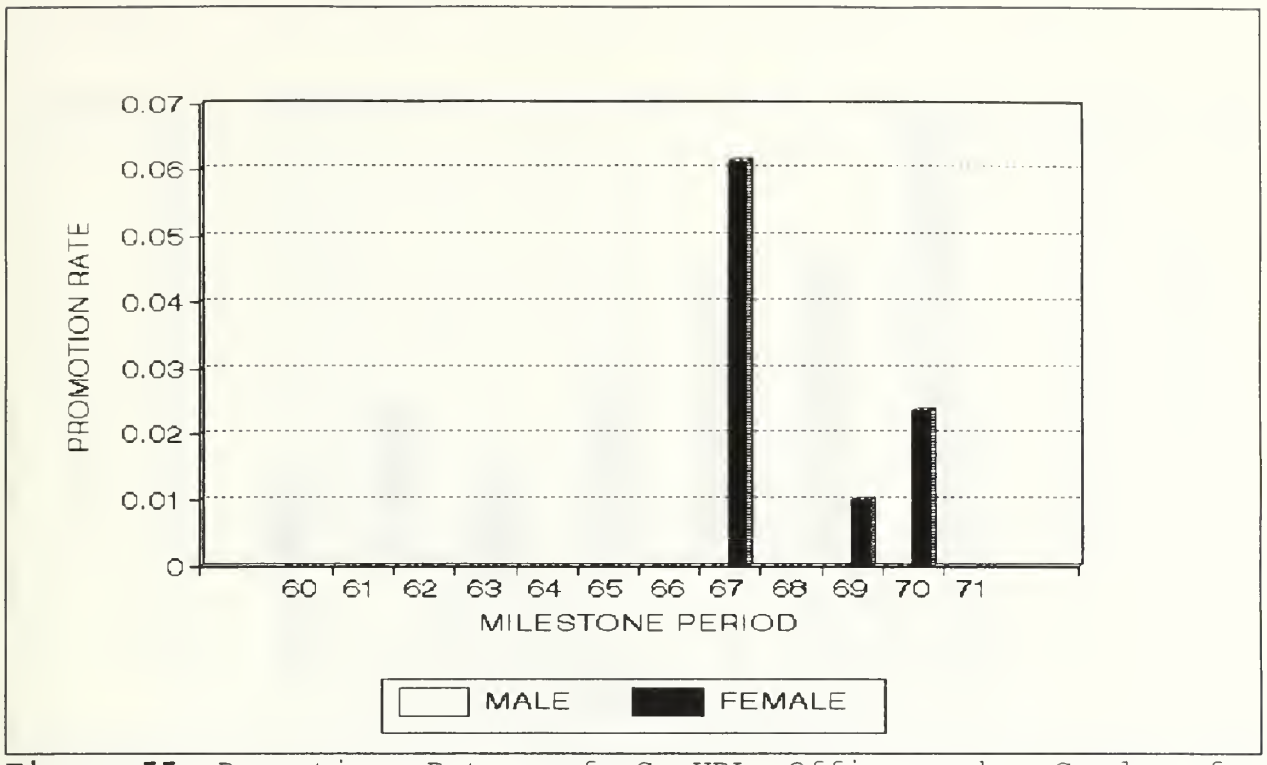

Figure 55 Promotion Rates of GenURL Officers by Gender for Milestone Period 5

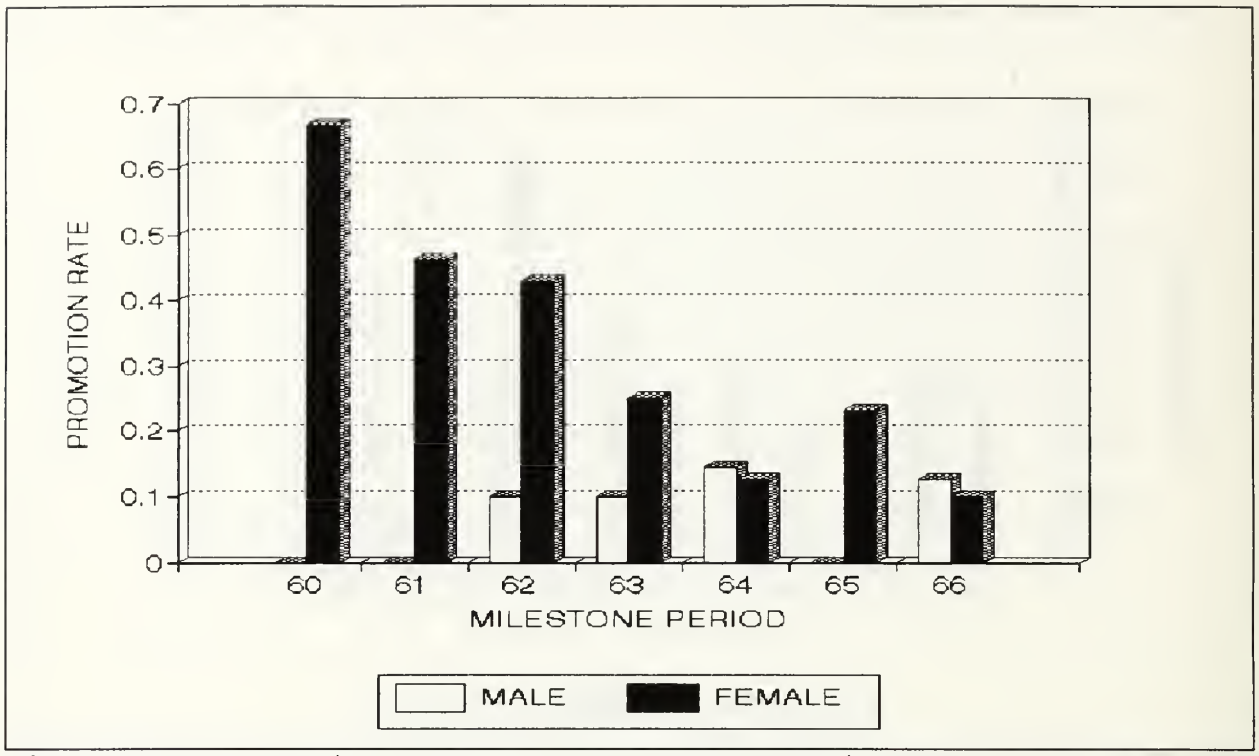

Figure 56 Promotion Rates of GenURL Officers by Gender for Milestone Period 6

APPENDIX P - SUPPORTING GRAPHS FOR THE AVIATION WARFARE COMMUNITY

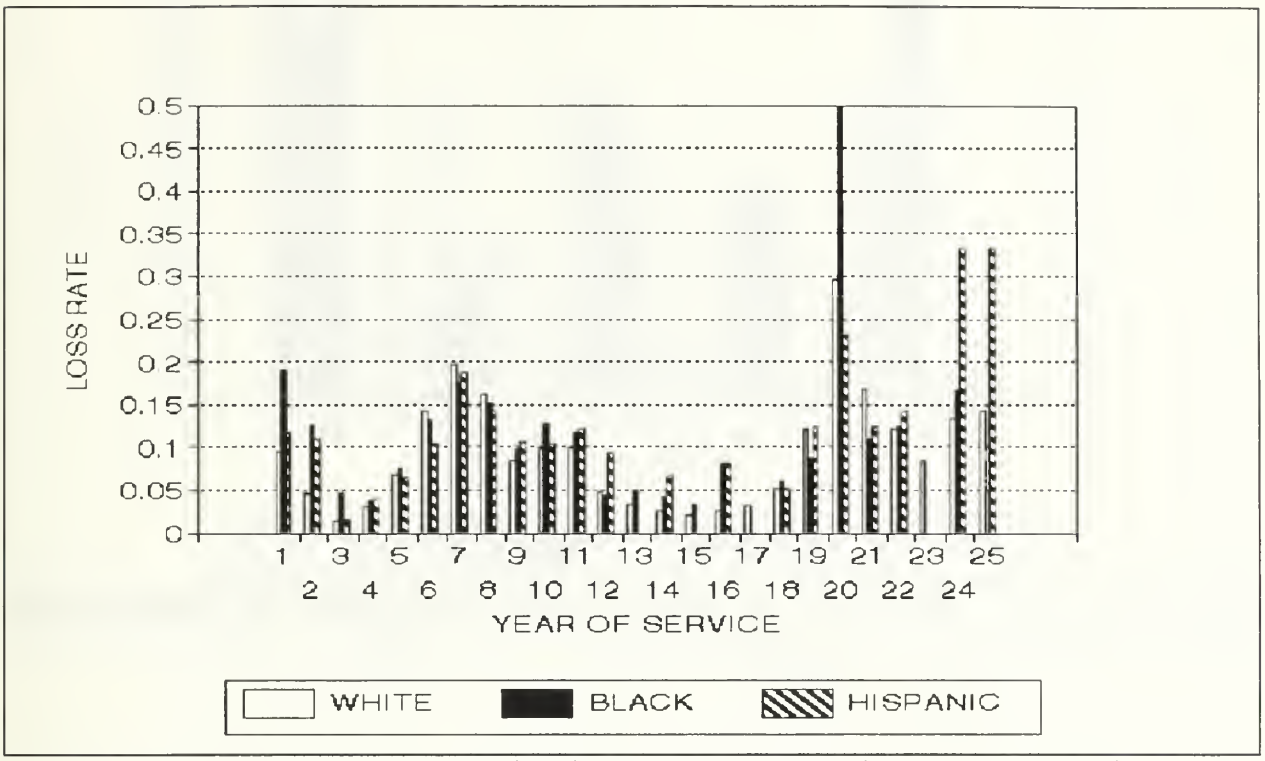

Figure 57 Loss Rates of Aviation Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups

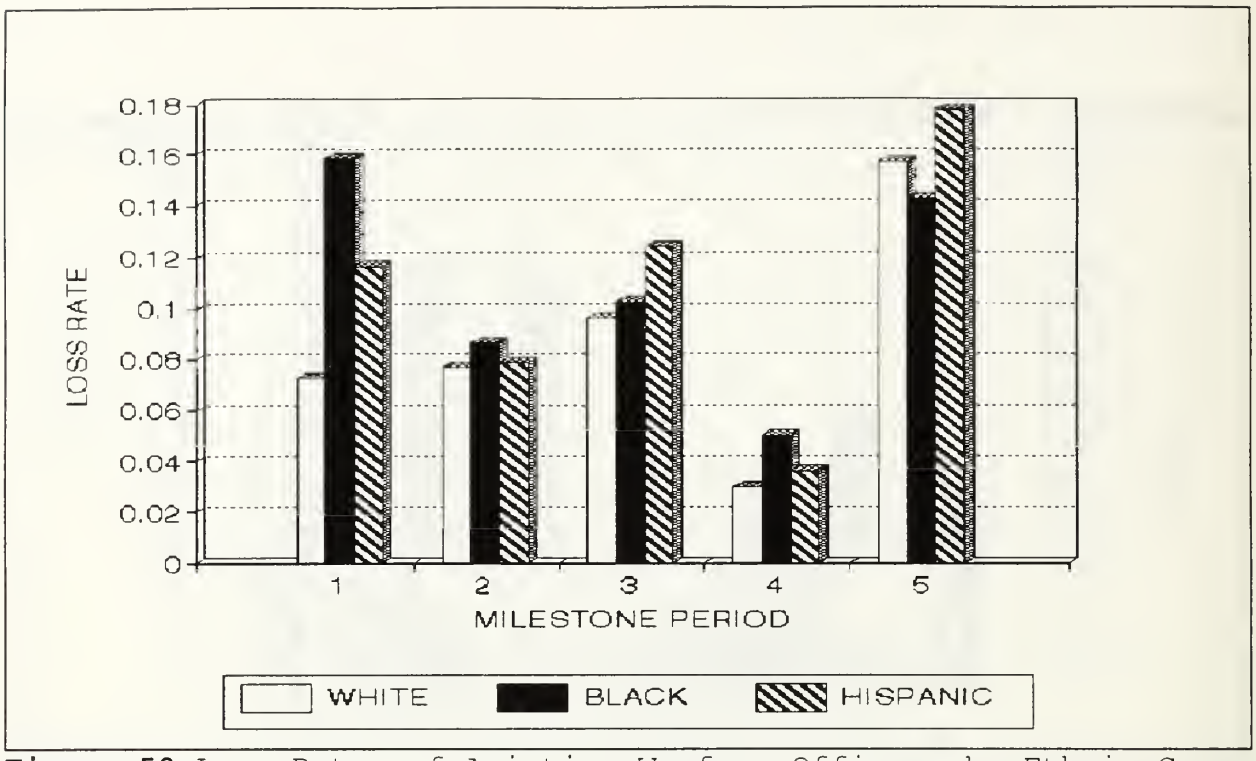

Figure 58 Loss Rates of Aviation Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups

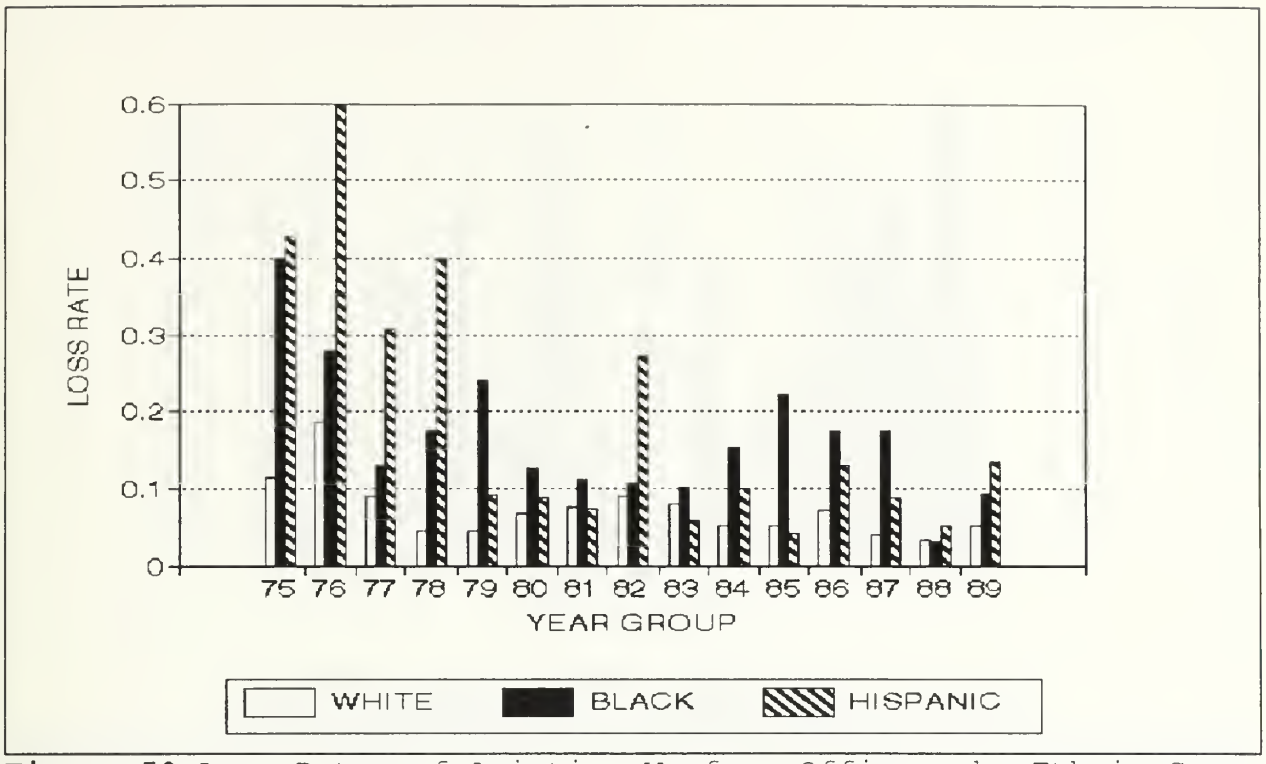

Figure 59 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 1

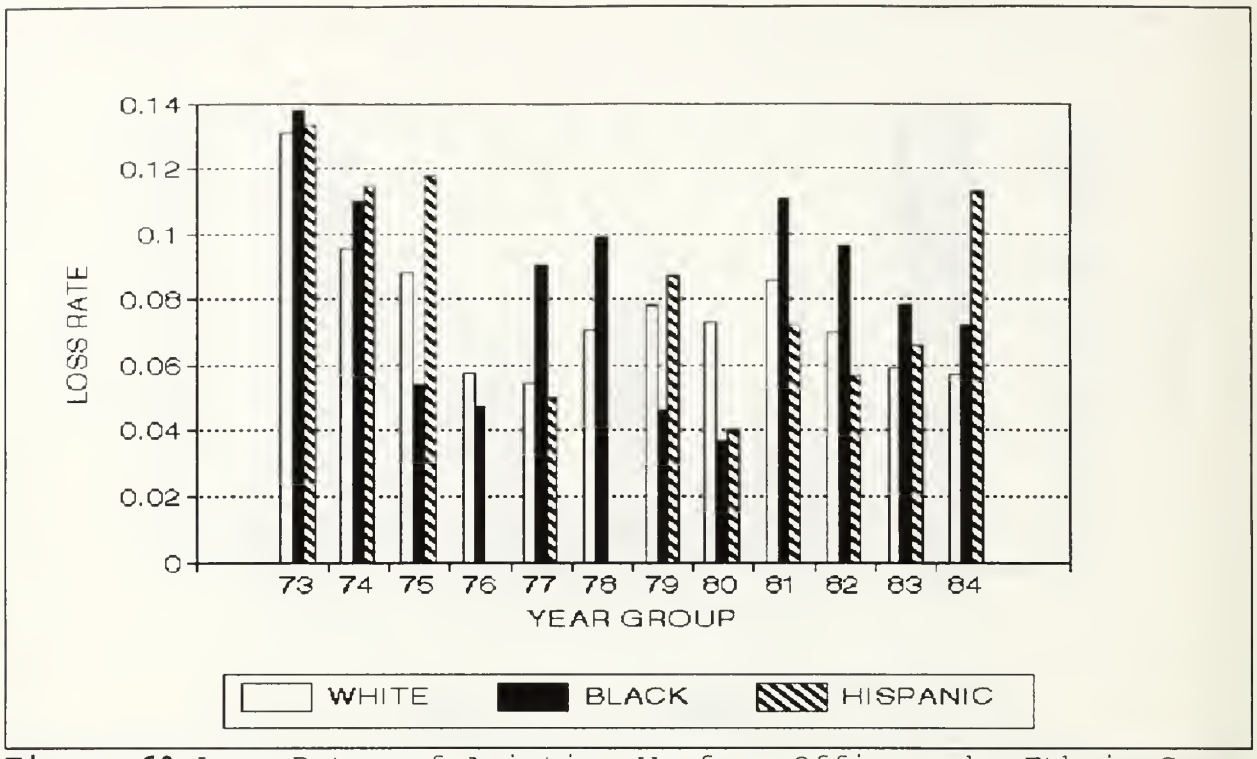

Figure 60 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 2

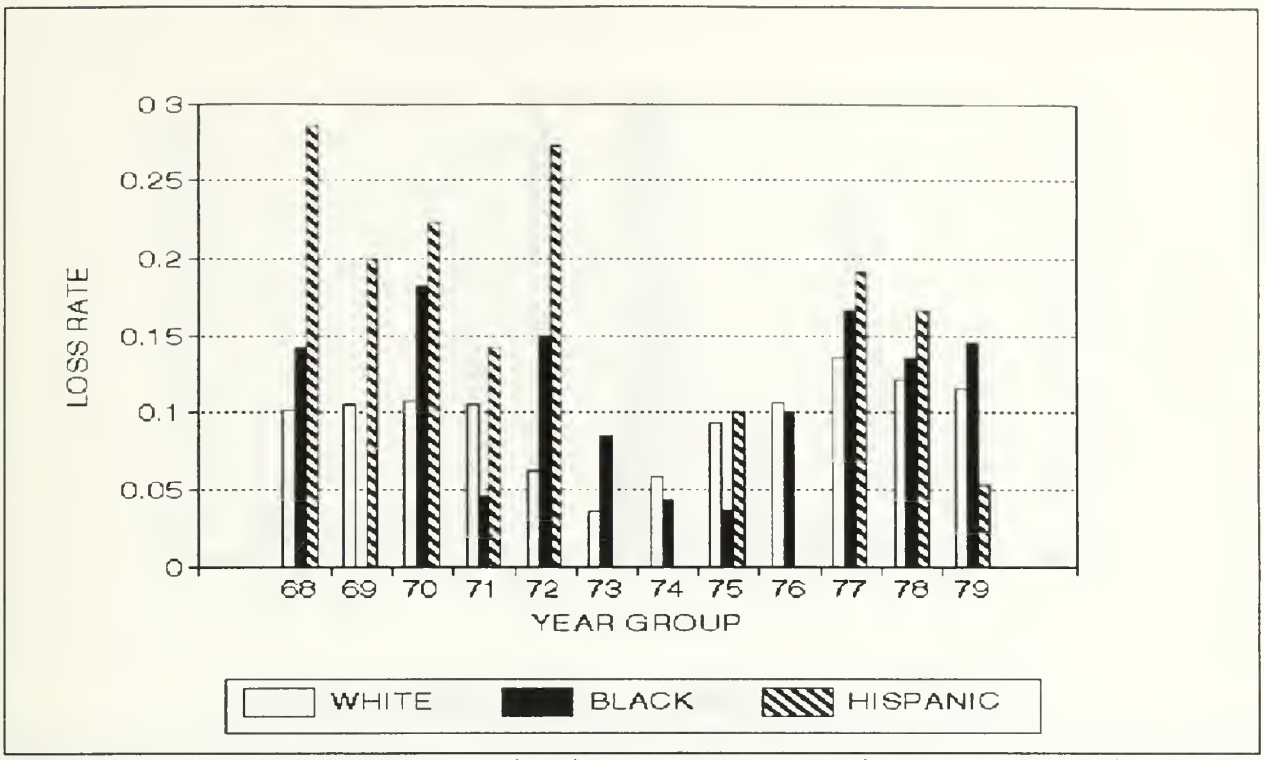

Figure 61 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 3

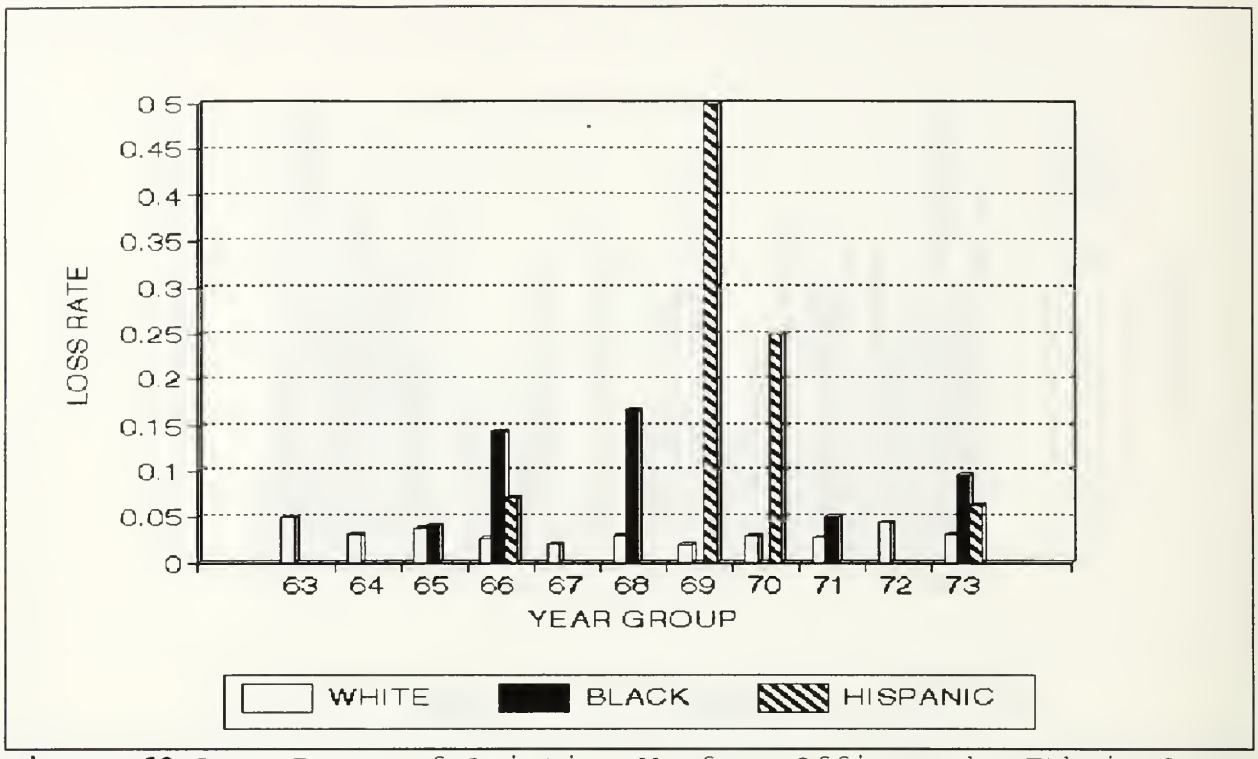

Figure 62 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 4

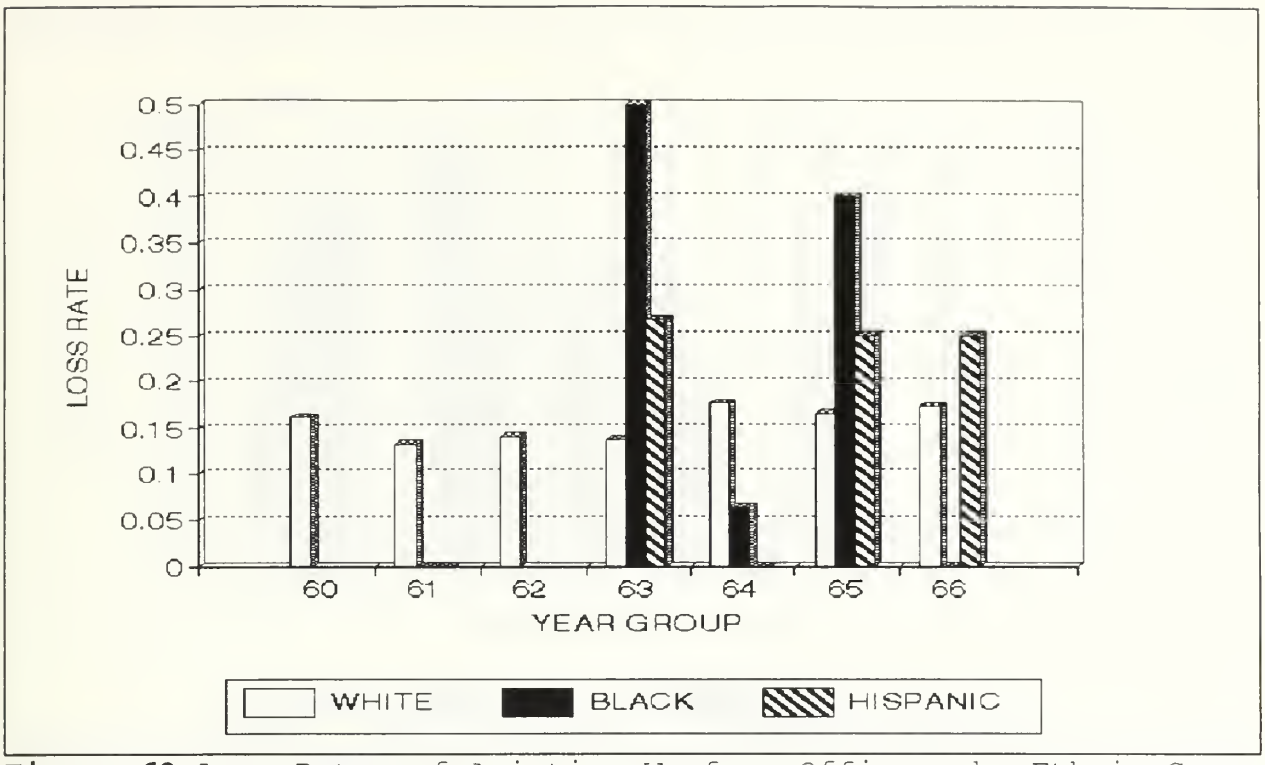

Figure 63 Loss Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 5

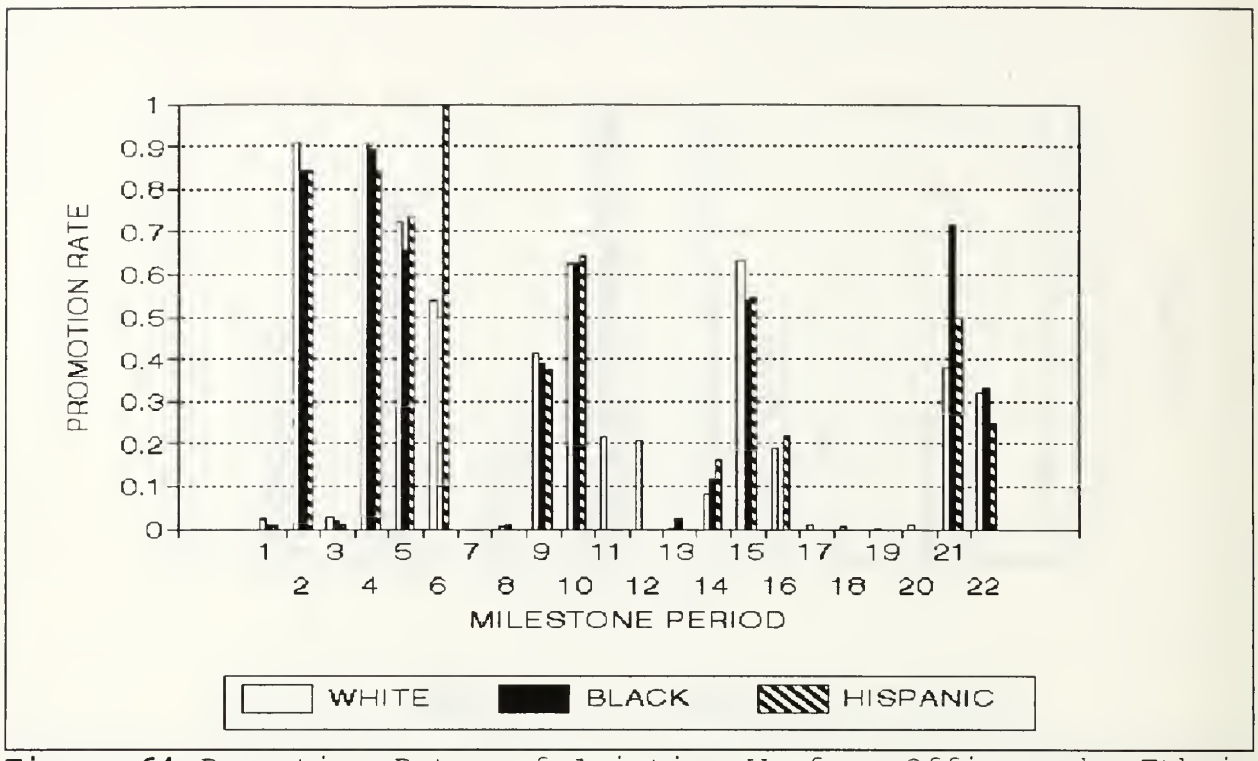

Figure 64 Promotion Rates of Aviation Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups

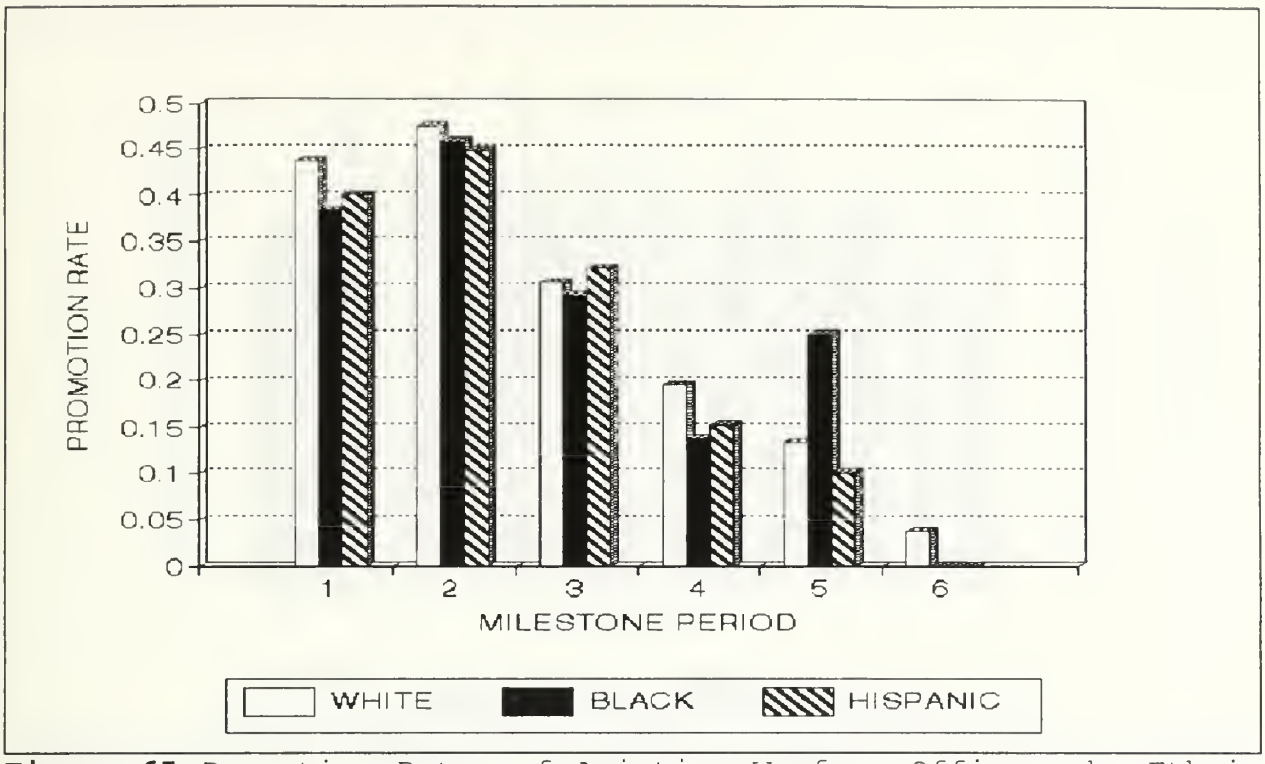

Figure 65 Promotion Rates of Aviation Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups

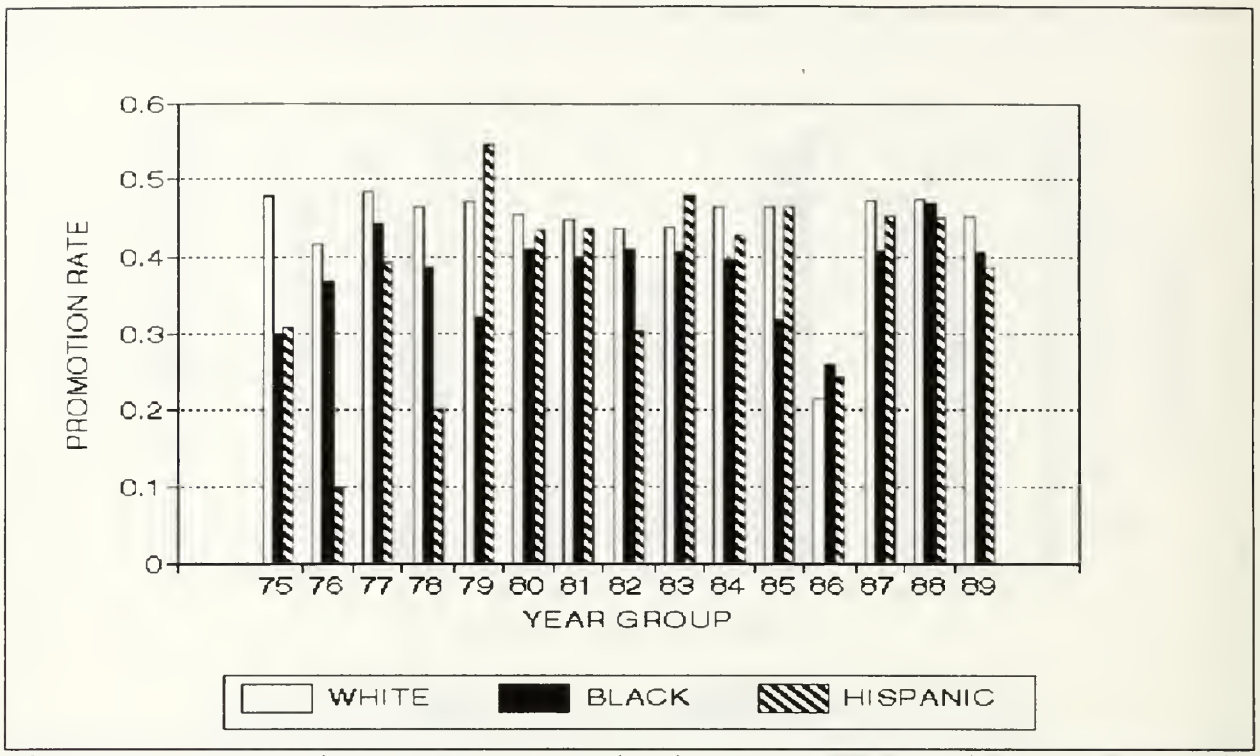

Figure 66 Promotion Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 1

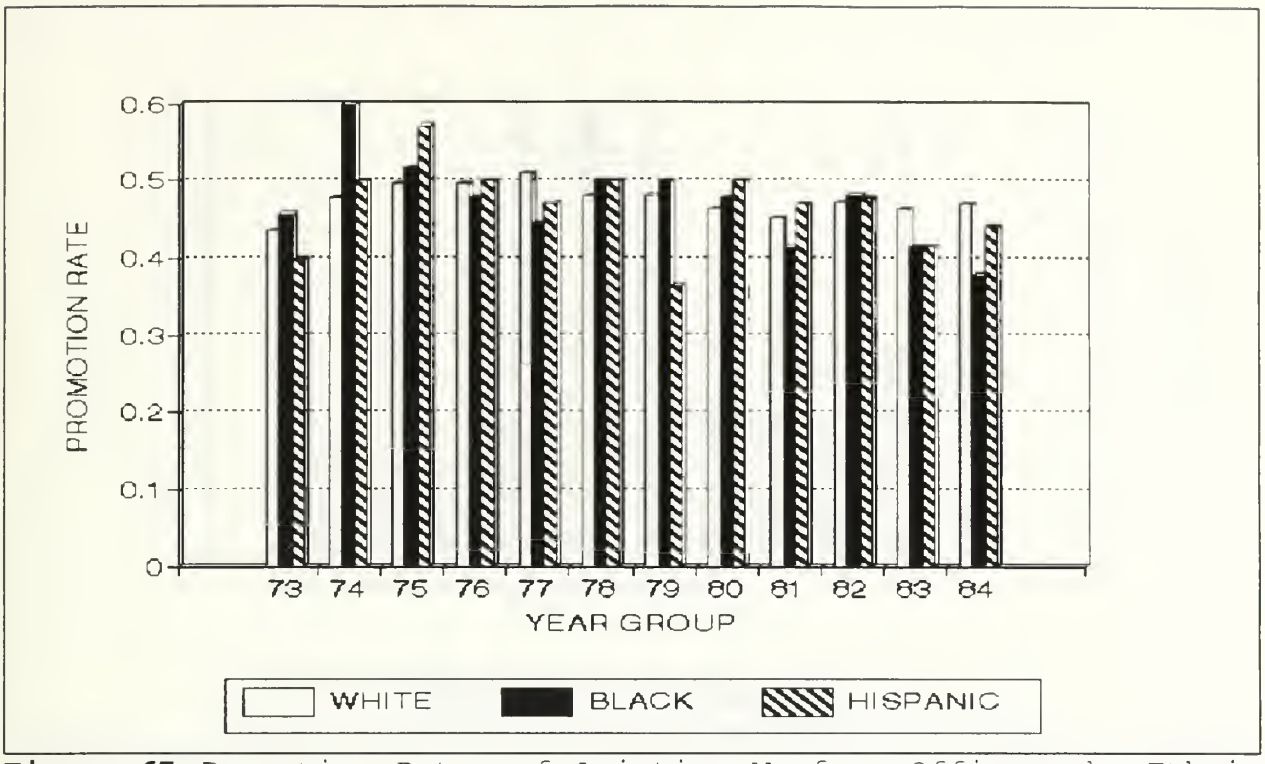

Figure 67 Promotion Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 2

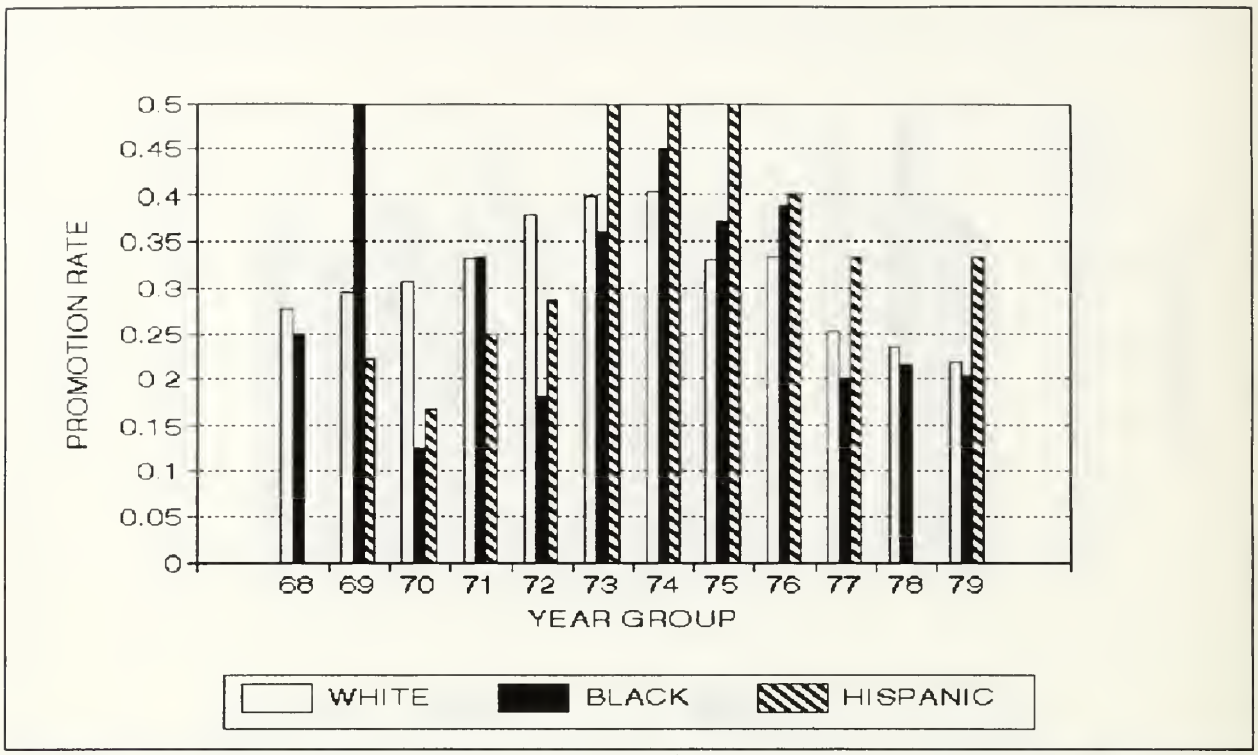

Figure 68 Promotion Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 3

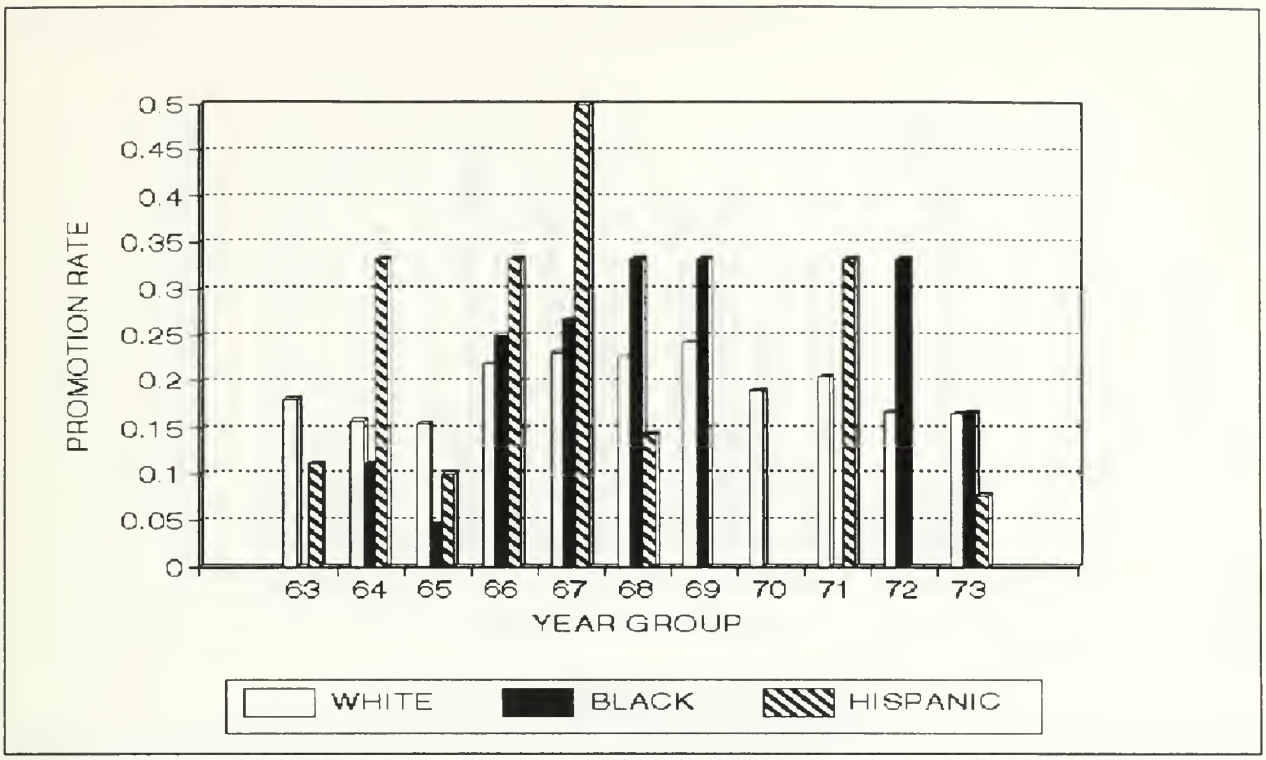

Figure 69 Promotion Rates of Aviation Warfare Officers by Ethnic Group for Milestone Period 4

Figure 70 Loss Rates of Aviation Warfare Officers by Gender by Year of Service Averaged Across Year Groups

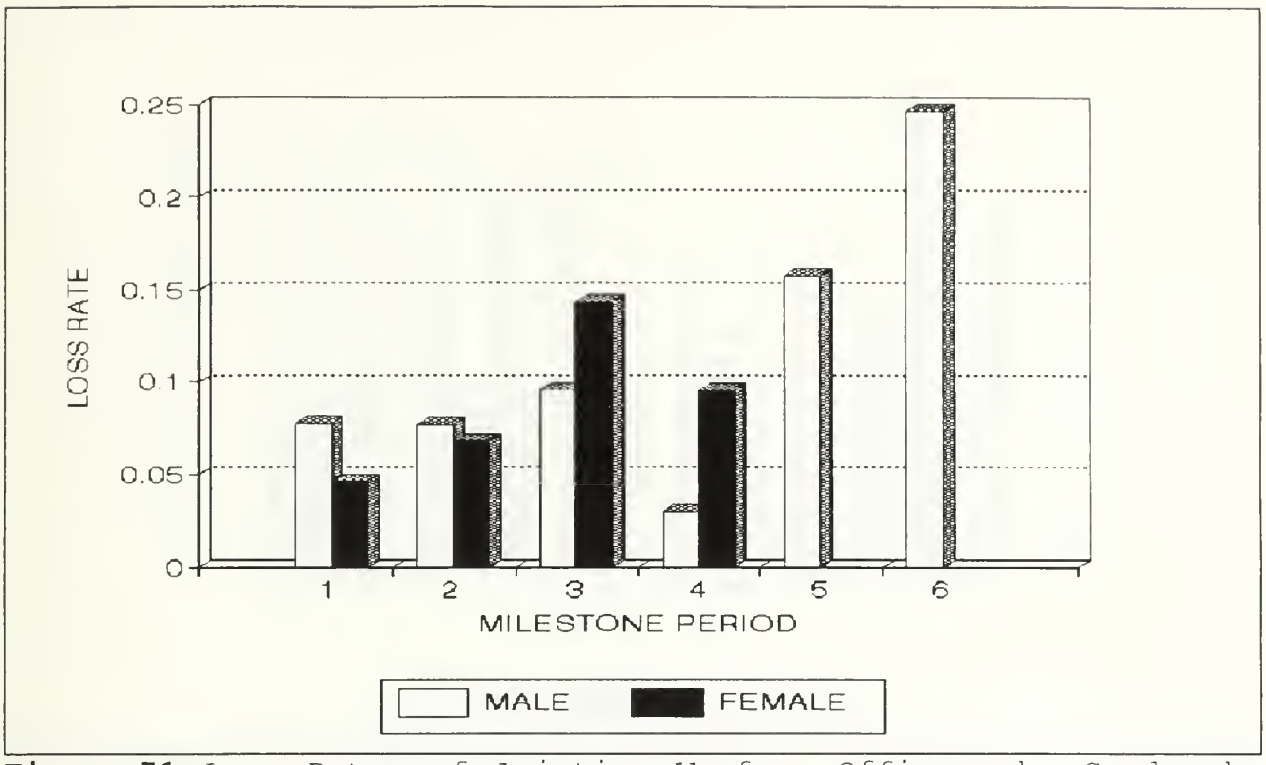

Figure 71 Loss Rates of Aviation Warfare Officers by Gender by Milestone Period Averaged Across Year Groups

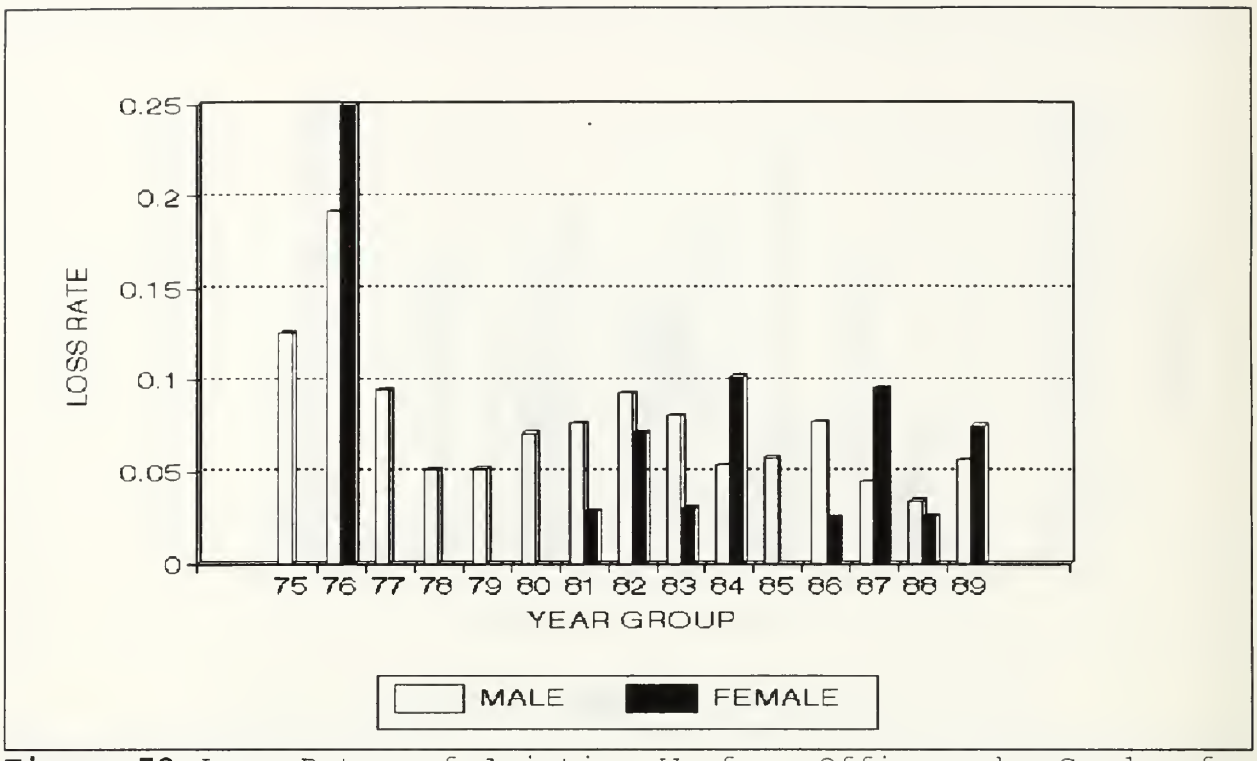

Figure 72 Loss Rates of Aviation Warfare Officers by Gender for Milestone Period 1

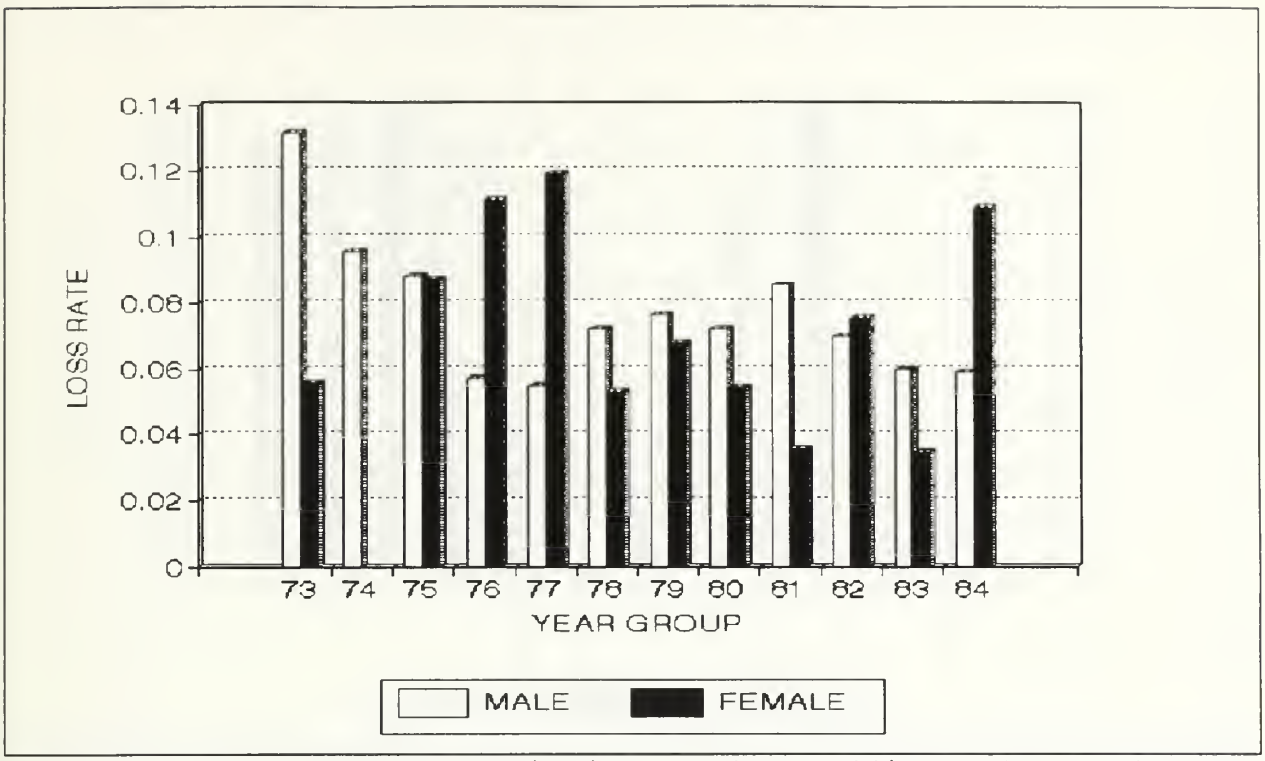

Figure 73 Loss Rates of Aviation Warfare Officers by Gender for Milestone Period 2

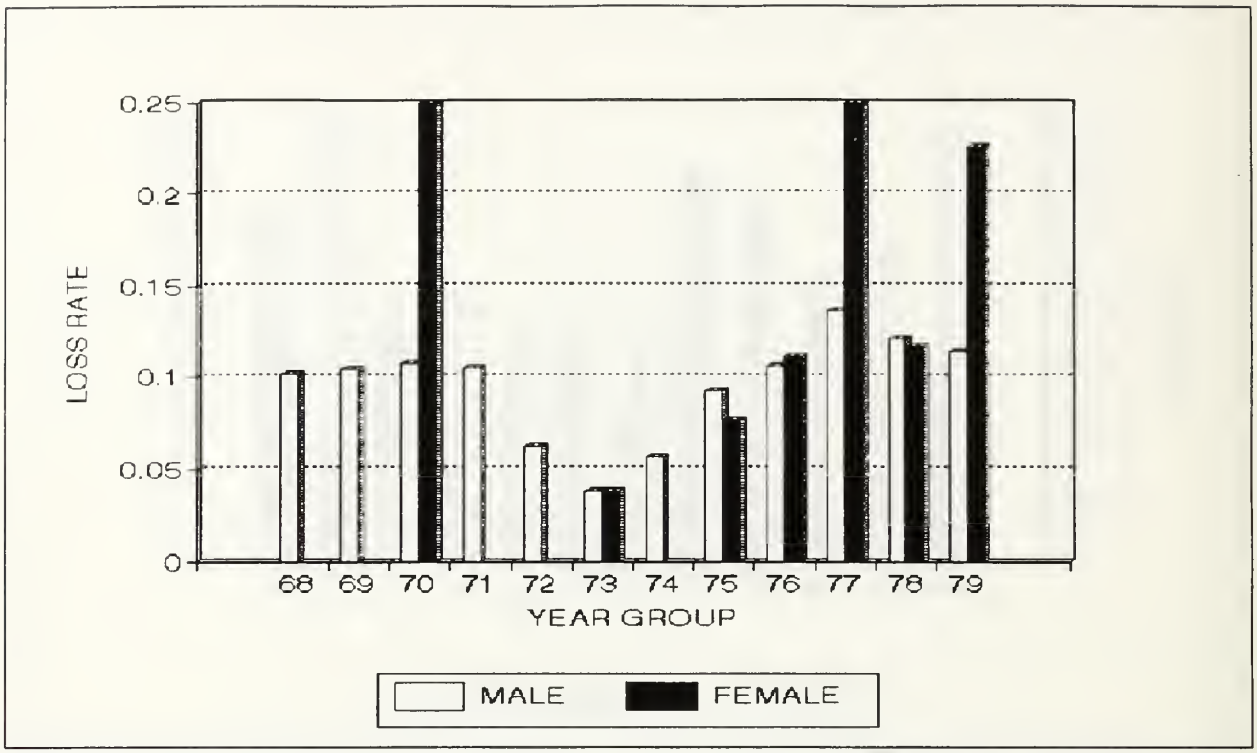

Figure 74 Loss Rates of Aviation Warfare Officers by Gender for Milestone Period 3

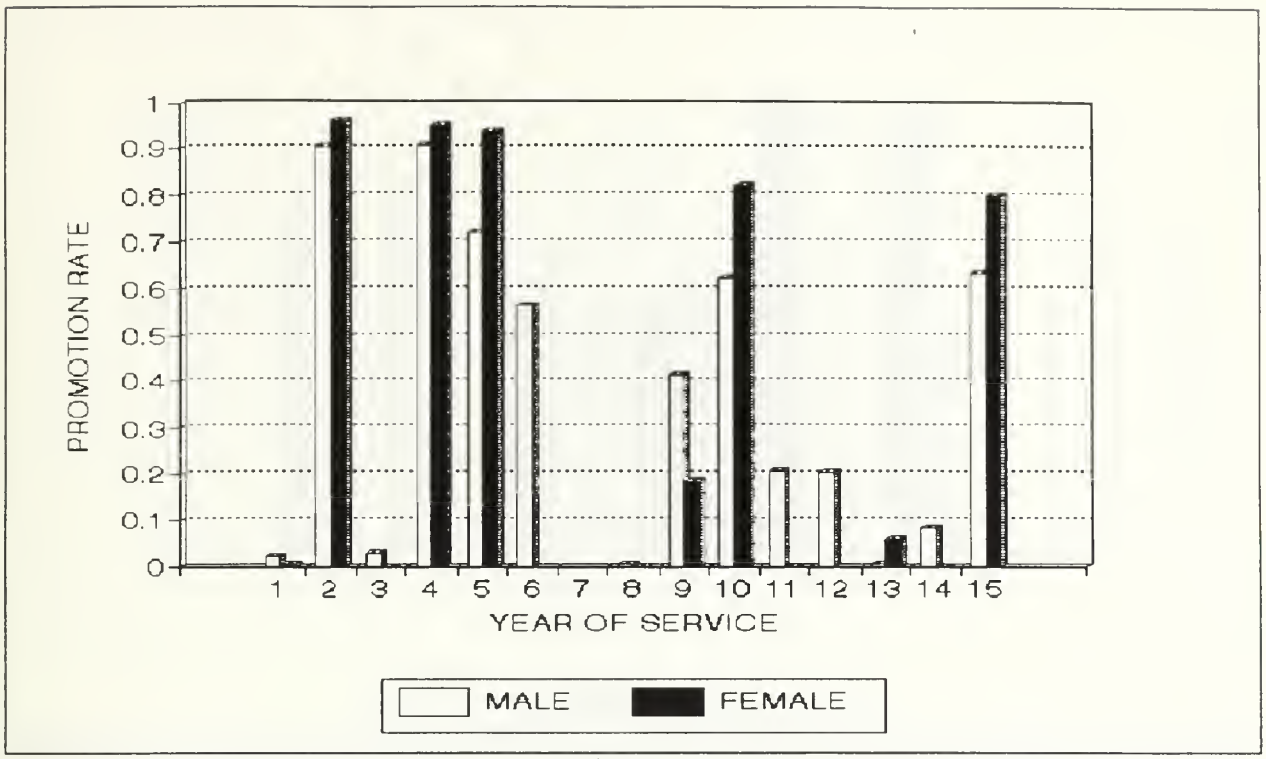

Figure 75 Promotion Rates of Aviation Warfare Officers by Gender by Year of Service Averaged Across Year Groups

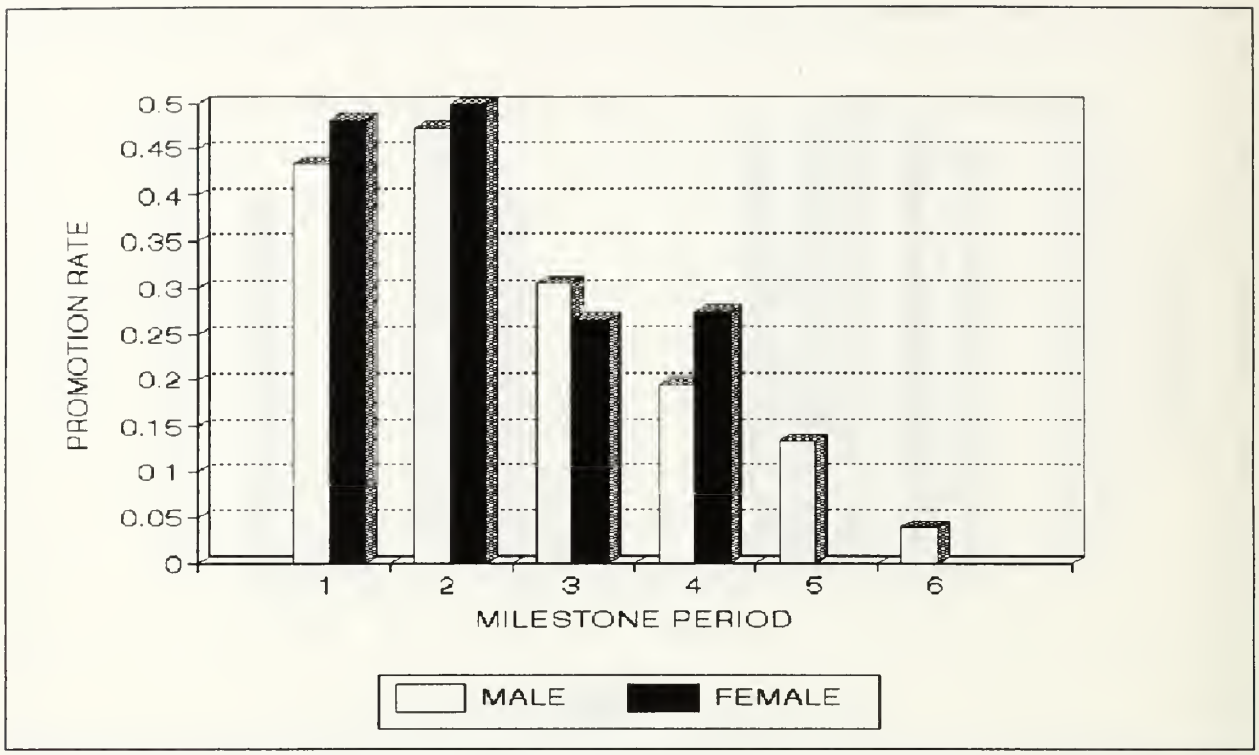

Figure 76 Promotion Rates of Aviation Warfare Officers by Gender by Milestone Period Averaged Across Year Groups

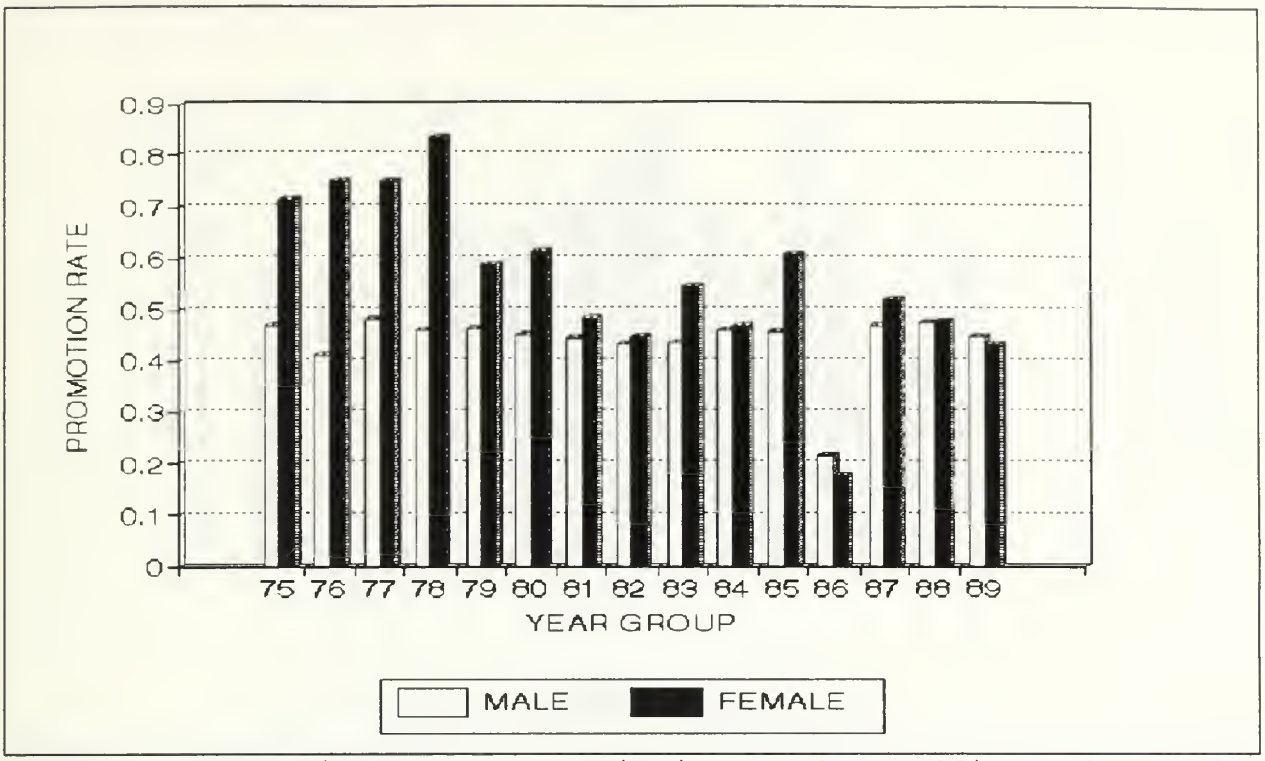

Figure 77 Promotion Rates of Aviation Warfare Officers by Gender for Milestone Period 1

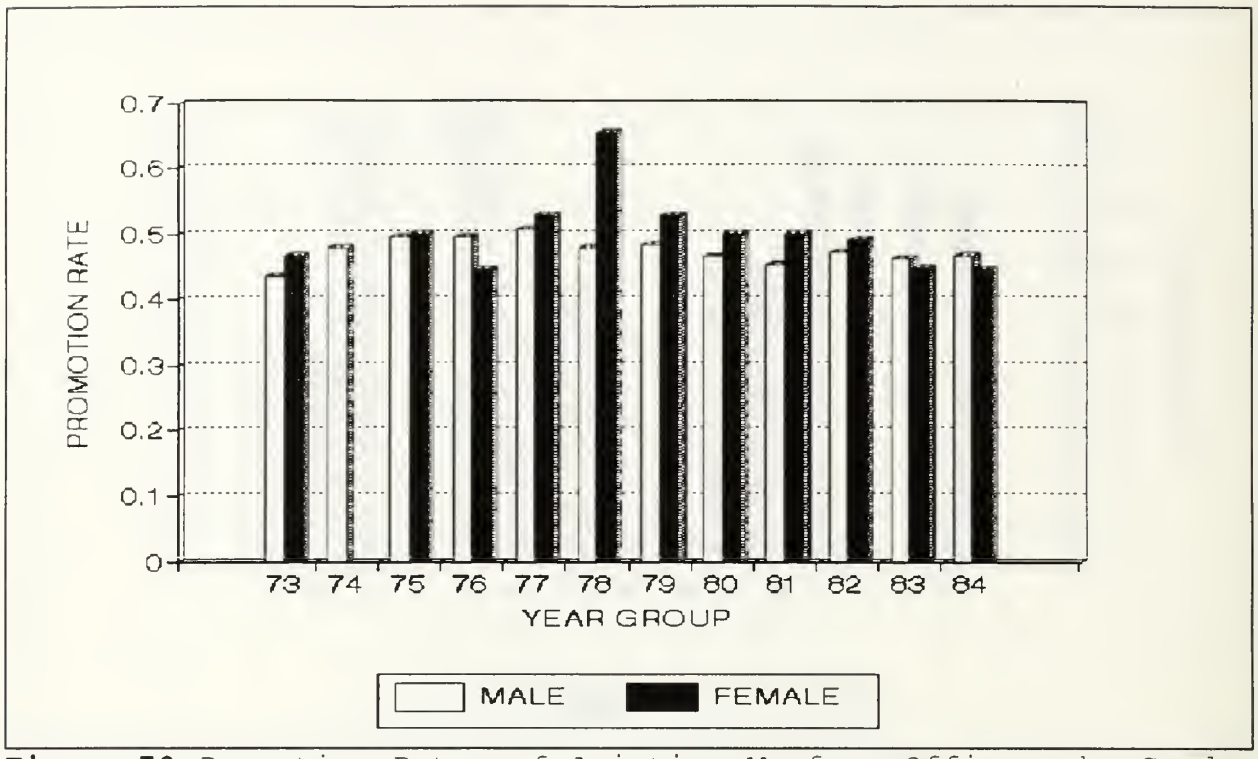

Figure 78 Promotion Rates of Aviation Warfare Officers by Gender for Milestone Period 2

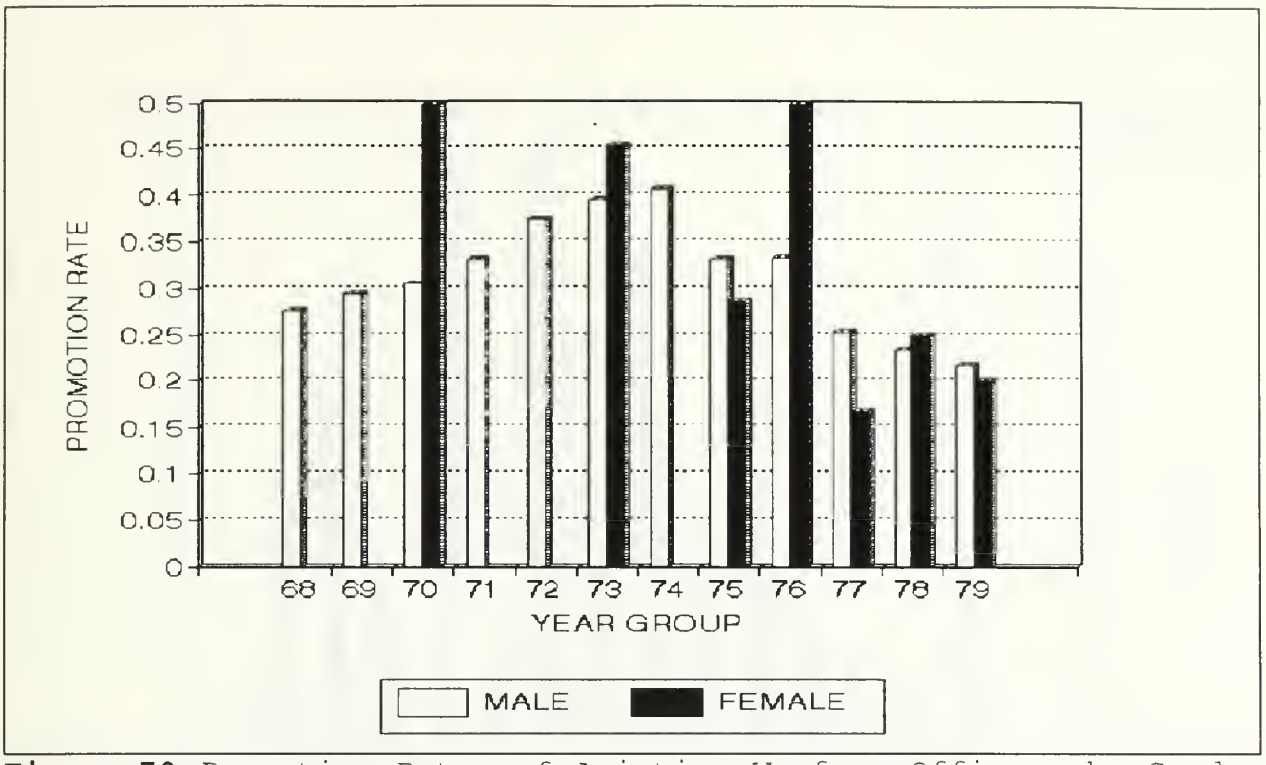

Figure 79 Promotion Rates of Aviation Warfare Officers by Gender for Milestone Period 3

APPENDIX Q - SUPPORTING GRAPHS FOR THE SUBMARINE WARFARE COMMUNITY

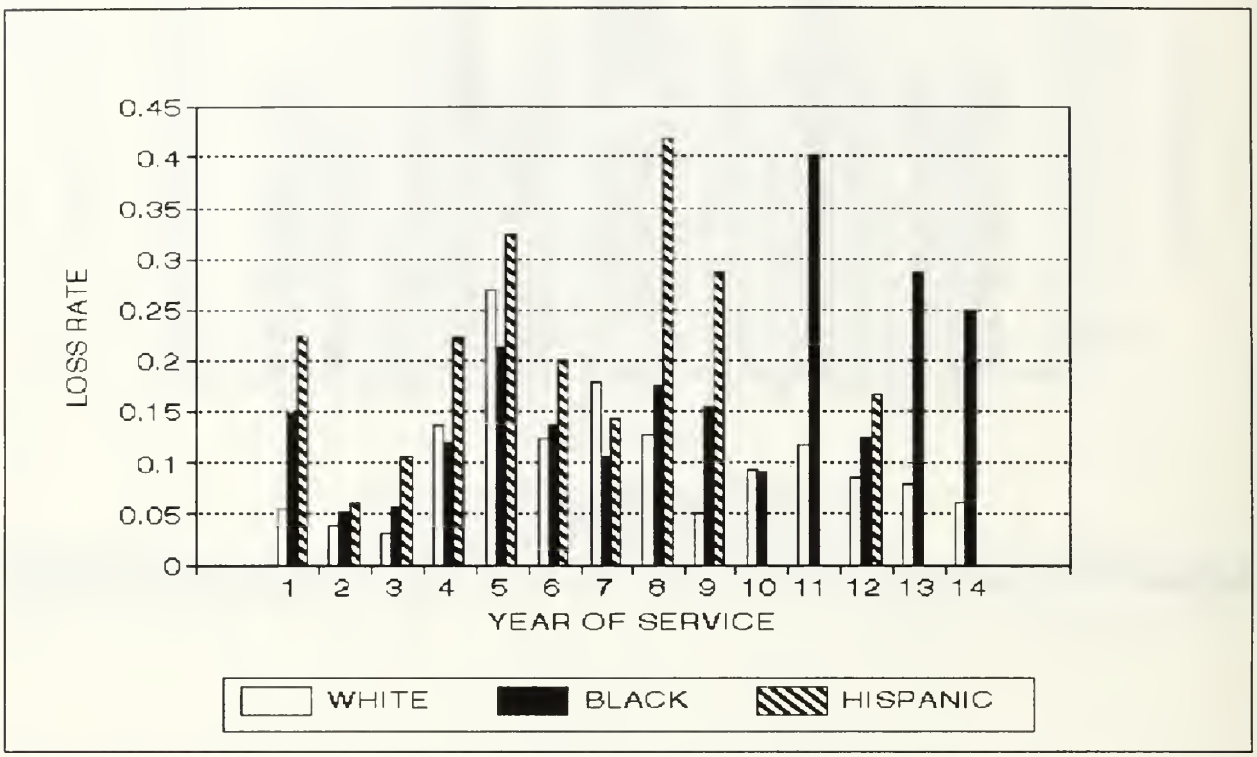

Figure 80 Loss Rates of Submarine Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups

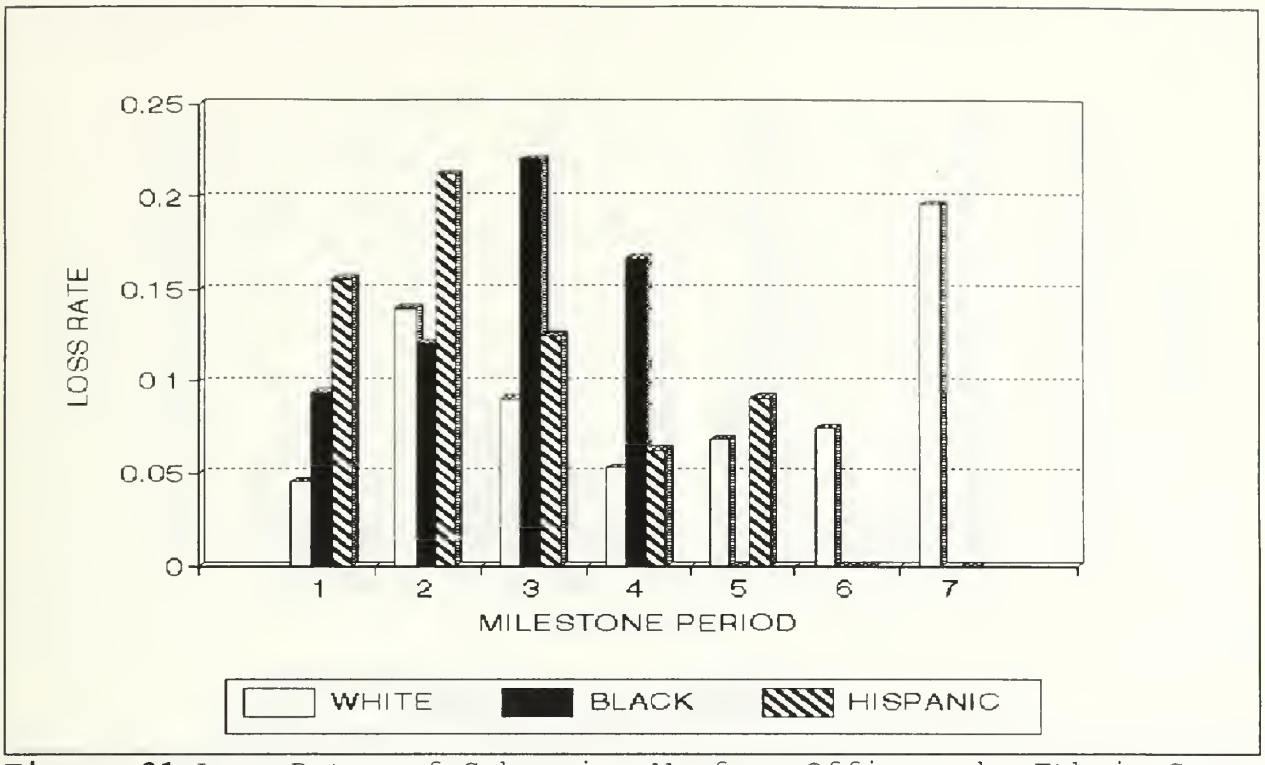

Figure 81 Loss Rates of Submarine Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups

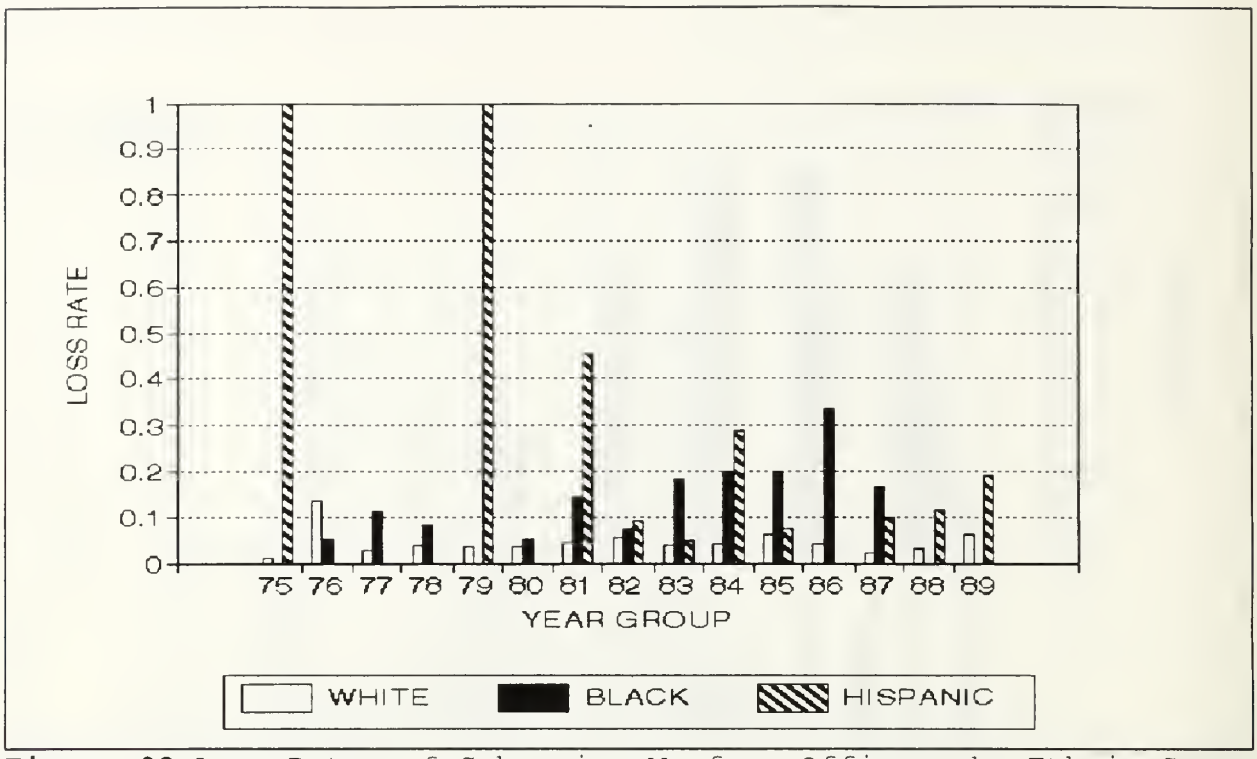

Figure 82 Loss Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 1

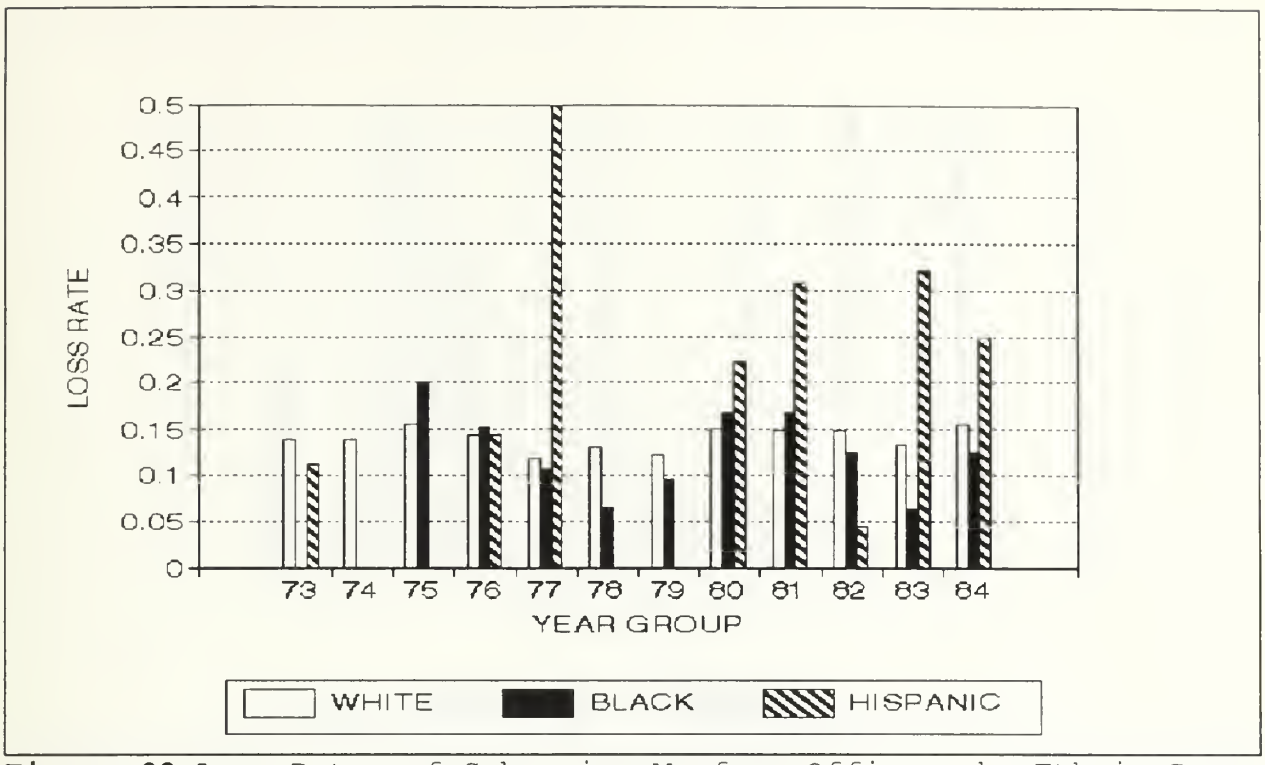

Figure 83 Loss Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 2

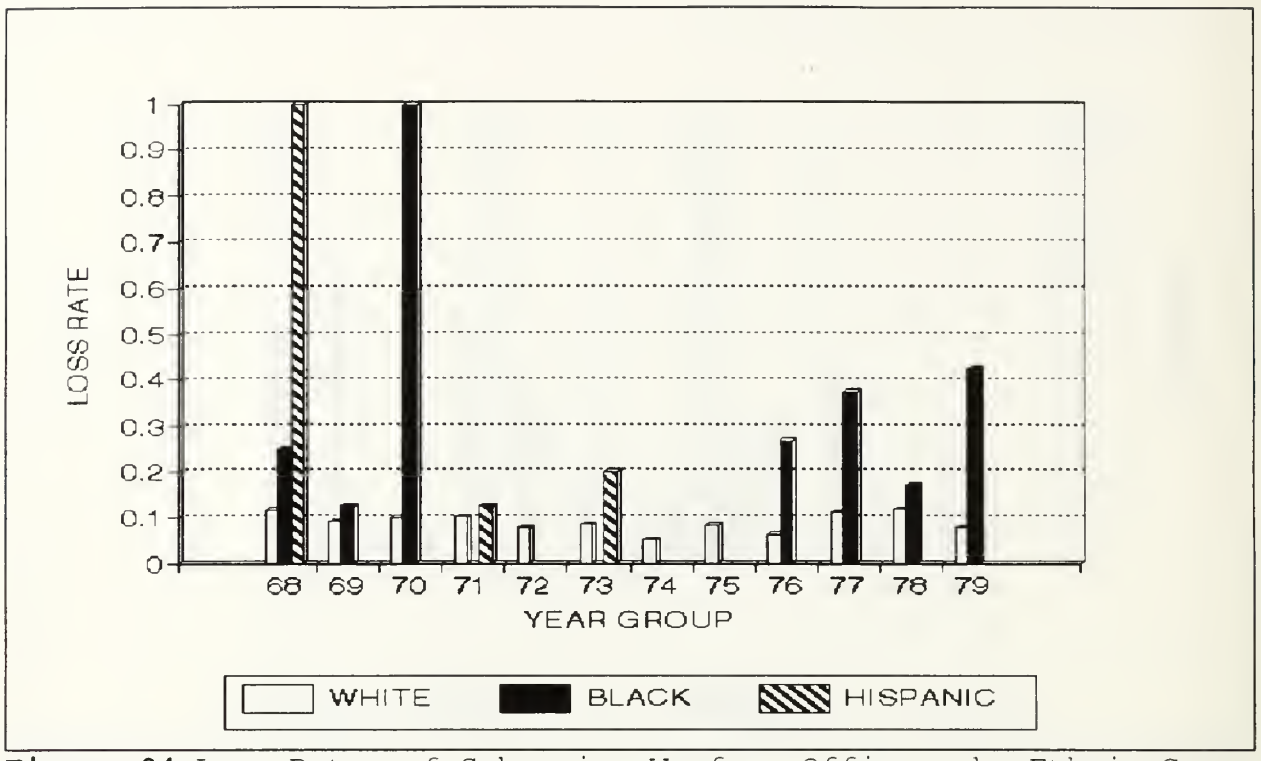

Figure 84 Loss Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 3

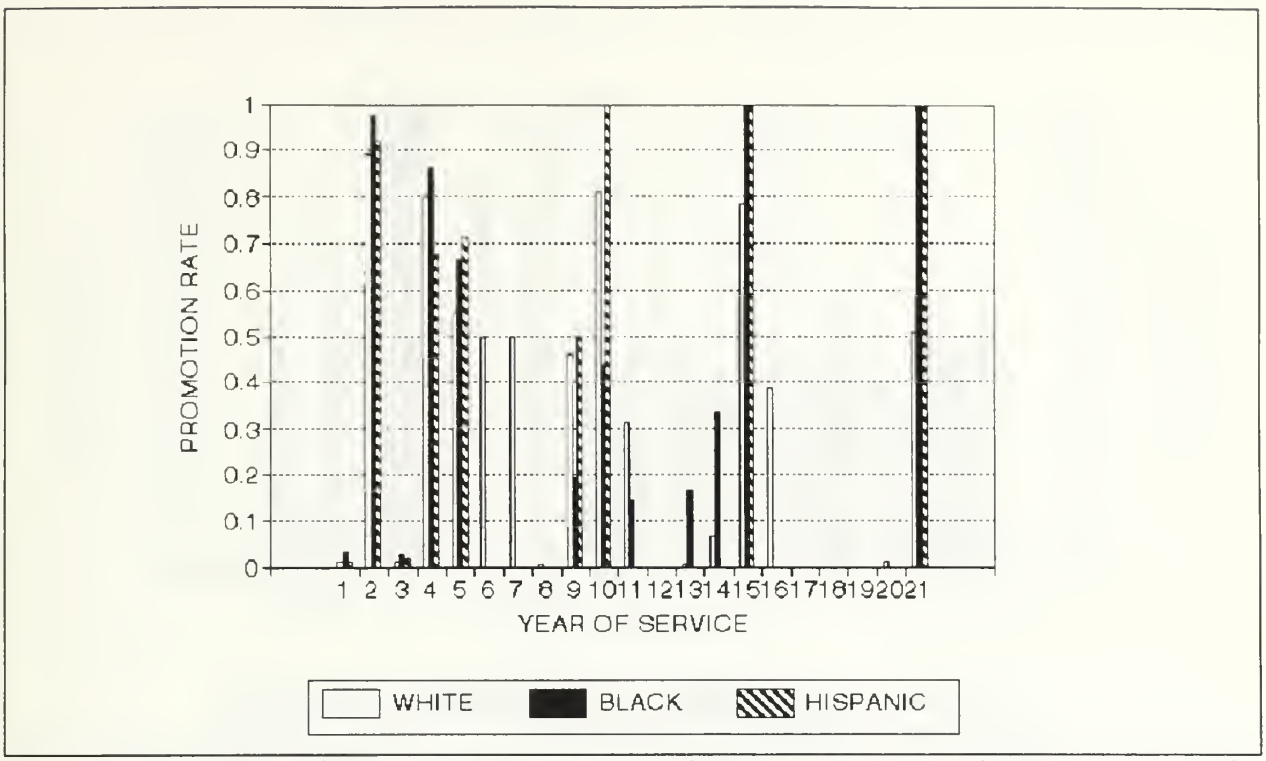

Figure 85 Promotion Rates of Submarine Warfare Officers by Ethnic Group by Year of Service Averaged Across Year Groups

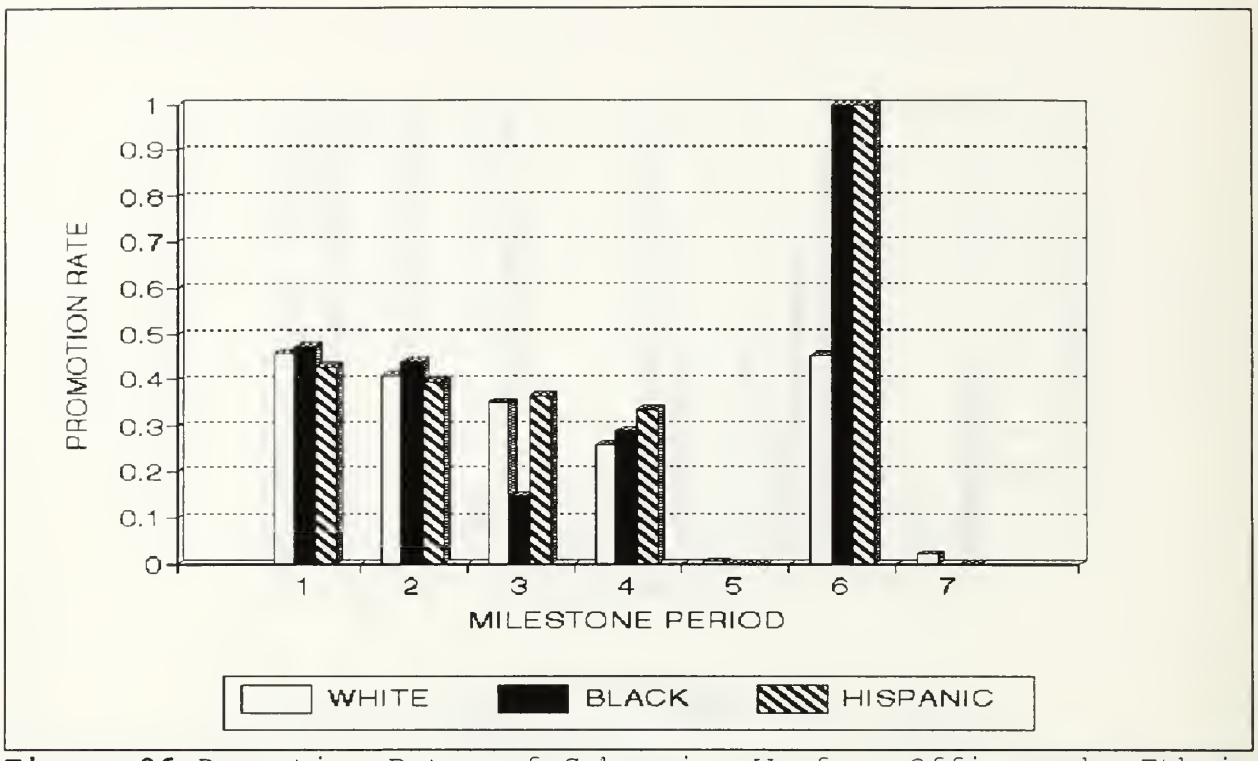

Figure 86 Promotion Rates of Submarine Warfare Officers by Ethnic Group by Milestone Period Averaged Across Year Groups

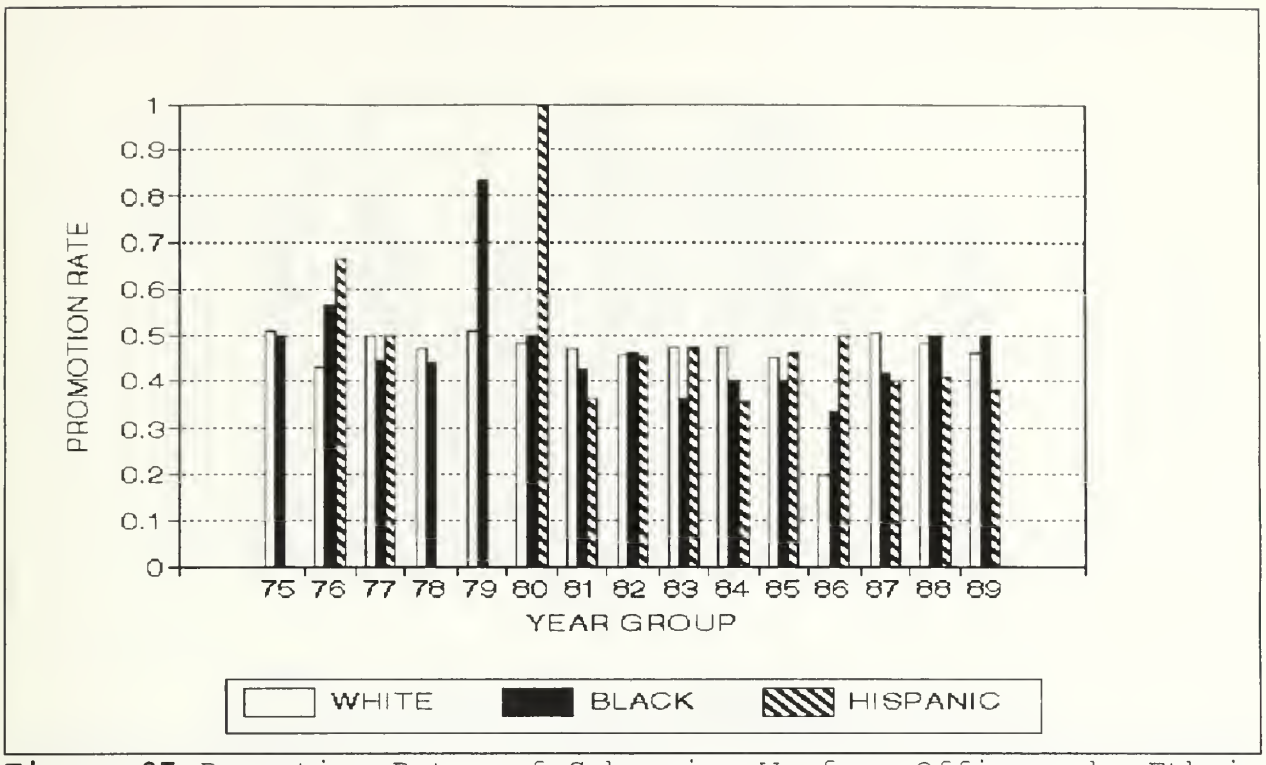

Figure 87 Promotion Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 1

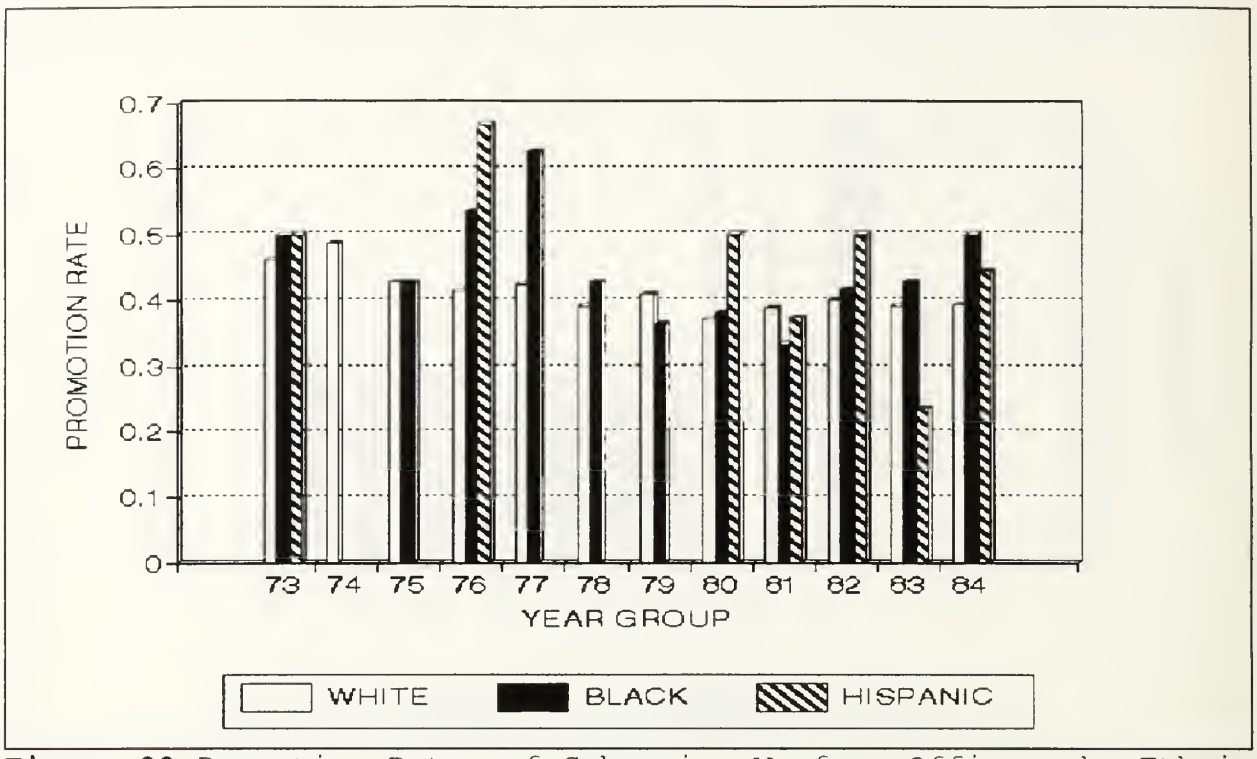

Figure 88 Promotion Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 2

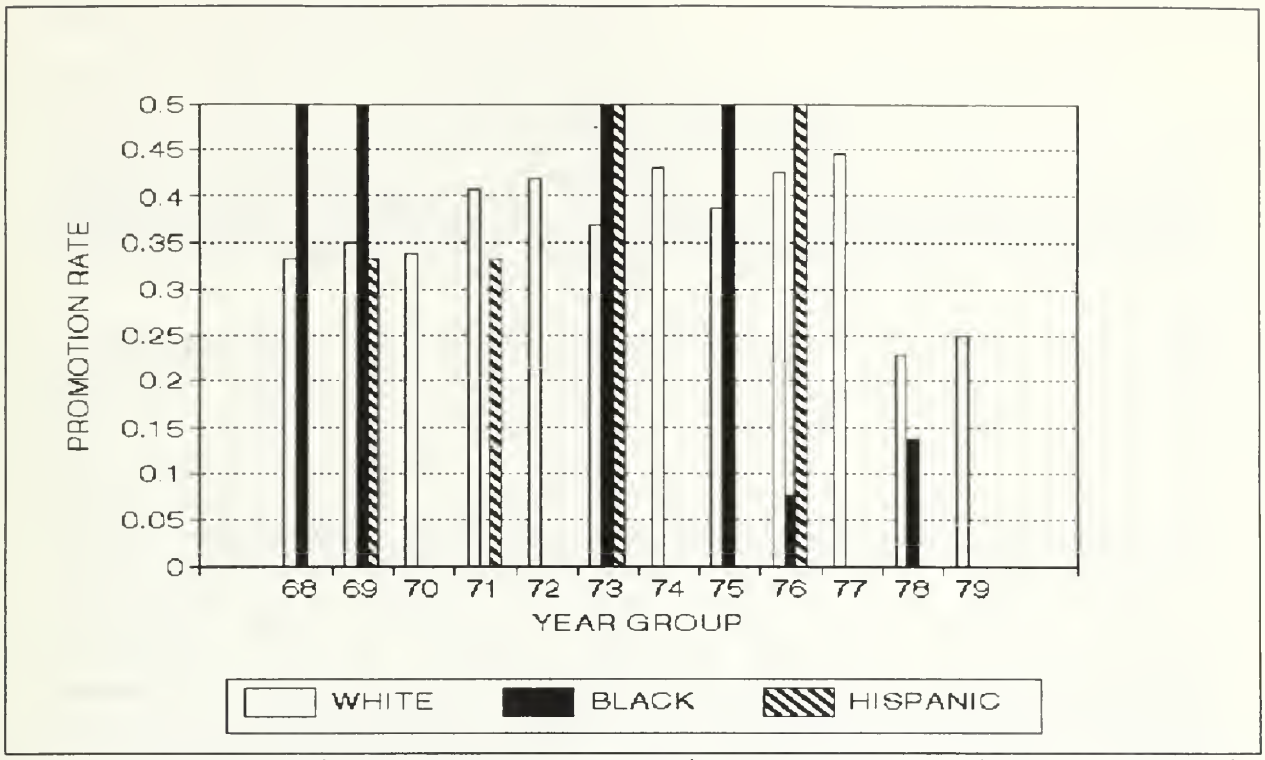

Figure 89 Promotion Rates of Submarine Warfare Officers by Ethnic Group for Milestone Period 3

LIST OF REFERENCES

Baldwin, Mary Frances, Developing a Climate of Equal Opportunity in Large Systems: A Case Study of the United States Navy's Equal Opportunity Race Relations, Ph.D. Dissertation, University of Massachusetts, 1983.

Barringer, Felicity, "Census Shows Profound Change in Racial Makeup of Nation; Shift Toward Minorities Since 1980 is Sharpest for the 20th Century," The New York Times, v140, pg A1, 11 March 1991.

Bartholomew, David J., Forbes, Andrew F., and McClean, Sally I., Statistical Techniques for Manpower Planning, second edition, West Sussex, England: John Wiley & Sons Ltd., 1991.

Butler, Terri L., "The Impact of Force Reductions on Promotions in the Navy Medical Service Corps," Master's Thesis, Naval Postgraduate School, Monterey, CA, December 1990.

DoD Directive 1350.2, The Department of Defense Military Equal Opportunity Program, 23 Dec 88.

Doyle, Karen Anne, "Future Navy Nurse Corps Grade Distributions: An Analysis of the Impact of Relief from Constraints by the Defense Officer Personnel Management Act of 1981," Master's Thesis, Naval Postgraduate School, Monterey, CA, December 1989.

Eitelberg, Mark J., Laurence, Janice H., and Brown, Dianne C., Becoming Brass: Issues in the Testing, Recruiting, and Selection of American Military Officers, National Commission on Testing and Public Policy, University of California at Berkeley, 1989.

FY90 Military Equal Opportunity Assessment of the Navy.

FY91 Military Equal Opportunity Assessment of the Navy.

GAO/NSIAD-89-210BR, Women in the Military; Career Progression Not a Current Problem but Concerns Remain, September 1989.

General URL Community Bulletin, Issue 5, December 1992.

Hansell, Ross C., "Officer Promotion Opportunity within the Navy Unrestricted Line 1973-1979," Master's Thesis, Naval Postgraduate

School, Monterey, CA, June 1979.

Hazard, Roberta L., RADM, "History of Women in the Navy or Progress Comes to the Tenacious," keynote address to Navy Women's National Convention, 30 July 1987.

Hispanics in America's Defense, Office of Deputy Assistant Secretary of Defense for Equal Opportunity and Safety Policy, 1983.

Longo, James, "Blacks Break Barriers to Grow in Rank," Navy Times, 25 July 1988.

Longo, James, "Study Finds Some Roadblocks for Minorities," Navy Times, 26 December 1988.

"Navy-wide Demographic Data for Third Quarter FY-92 (01 Apr 92 to 30 Jun 92)," Assistant Chief of Naval Personnel, Personal Readiness and Community Support (Pers-6) ltr ser 61/453, 3 September 1992.

Northrup, Herbert R., et al., Black and Other Minority Participation in the All-Volunteer Navy and Marine Corps, Studies of Negro Employment, Vol. VIII, Industrial Research Unit: The Wharton School, University of Pennsylvania, 1979.

OPNAVINST 5354.3D, Navy Affirmative Action Plan, 29 Aug 91.

Sinaiko, Wallace H., Curran, Patrick Michael, King, Bert T., and Schneider, Jeffrey M., Hispanic Subpopulations and Naval Service: Proceedings of a Workshop, Technical Report SI/MRAS/TR-11, Smithsonian Institution, Alexandria, Virginia, May 1985.

The Naval Officer's Career Planning Guidebook, (NAVPERS 15605), 1990 edition.

Turley, Lori Foster, "The Feasability of Specialized Subcommunities within the General Unrestricted Line Officer Community," Master's Thesis, Naval Postgraduate School, Monterey, CA, September 1990.

Zucca, Gary J., Ethnic Distribution Among U.S. Navy Occupation Specialties and Ranks: Organizational Implications, Ph.D. Dissertation, University of Florida, 1984.

INITIAL DISTRIBUTION LIST

		No. Copies
1.	Defense Technical Information Center Cameron Station Alexandria VA 22304-6145	2
2.	Library, Code 052 Naval Postgraduate School Monterey CA 93943-5002	2
3.	Professor Paul R. Milch (Code OR/MH) Naval Postgraduate School Monterey, CA 93943-5002	2
4.	Professor Ronald A. Weitzman (Code AS/WZ) Naval Postgraduate School Monterey, CA 93943-5002	1
5.	Department of Navy Bureau of Navy Personnel (PERS-61) 2 Columbia Pike Washington, D.C. 20370-5610	5
6.	Department of Navy Bureau of Navy Personnel (PERS-00W) 2 Columbia Pike Washington, D.C. 20370-5000	1
7.	NAVPERSRANDCEN 53335 Ryne Road San Diego, CA 92152-7250 Attn: Mark Chipman, Code 113	1
8.	LCDR Lisa R. Werkhaven Navy Recruiting District 8925 N. Meridian St. Suite 250 Indianapolis, IN 46260-2386	2

144-103

Thesis
W4643 Werkhaven
c.1 A cohort analysis of
career progression for
ethnic and female officers
in the U.S. Navy.

AMERICAN BINDERY
9-93
10

DUDLEY KNOX LIBRARY
3 2768 00036282 6